Hints on Grape Culture.—I.

THERE can be little doubt, we think, that the grape is destined to play an important part in fruit culture. The grape will be very extensively cultivated, not only for the table, but for the manufacture of wine; and there is nothing chimerical in the idea, that at no very distant day American wine will be imported hence to Europe. The first decade in this revolution has already been reached, and we are now furnishing vines for planting in Madeira and the old Douro districts of Portugal, where the vineyards have been nearly destroyed by the Oidium. Already upwards of forty thousand Isabella and Catawba vines have been planted at Oporto. We do not think the kinds have been wisely selected, since the old Isabella and Catawba, of all our native varieties, are most susceptible to the influence which has proved so destructive to the vineyards of Portugal. Better kinds, in our estimation, for wine, would have been the Diana, Delaware, Lincoln, and Lenoir. But we only allude to this as one of the signs of the times.

We propose, in a series of articles, to throw out some practical "Hints" on the cultivation of the vine, giving prominence to our own experience on the subject. We purpose hereafter to elaborate these "Hints," and use them in another form. We may not be able to say any thing new on such an old subject, but among our readers there are many beginners, (in fact, it is at the request of a number of such that we write,) to whom we may be able to give a right direction at the start.

The first thing to be thought of is a proper *exposure* or aspect. For a vineyard, the best exposure is one looking south, or a little east of south. Where this is not to be had, we should choose an exposure in the following order: southeast, east, southwest, west, the last, however, being a bad one under most circumstances. A northern exposure should not be thought of, for it is only under very peculiar circumstances that such a one can be made available for the production of good grapes. Whatever the exposure of a vineyard may happen to be, protection of some kind is a very important matter. The prevalent winds injurious to vegetation come from the north, northeast, and northwest, and from the sweep of these the vineyard should be protected. We have found, in our experience, that shelter at these points exercises a marked influence upon the health of vegetation, no matter whether a vineyard, an orchard, or a garden. It equalizes, to a certain degree, the surrounding atmosphere, prevents sudden and violent evaporation from the soil and from the leaves of plants, and acts in other beneficial ways which we shall explain hereafter.

The material to be used for protection is of some importance. In some locations a natural shelter will be found in belts of wood; in others it will be necessary to supply it. A variety of trees may be used for this purpose, but we prefer some evergreen, and among evergreens the best are the Hemlock and Norway Spruce. Both of them will bear clipping almost as well as an Arbor Vitæ, though much clipping is not needed, the object being to get a hedge some twenty or thirty feet high. Whatever tree be used, whether evergreen or deciduous, let it not be one with wide ranging roots; for this reason, the yellow Locust is not a good one; it may be remarked, in passing, however, that roots do not ramble as much in a good soil as they do in a poor one; this is not, it is true, in accordance with the general belief, but it is in precise accordance with both our philosophy and experience. In some localities, a simple fence made of hemlock boards will afford a

good shelter; but the reader must exercise his judgment as to the kind and degree of shelter required for his particular case, our object at present being to impress his mind with the fact that something of the kind is necessary.

As pertaining to this part of the subject, we may remark, that a hill-side with a gentle southeasterly slope is to be preferred to a flat surface; we speak now of *exposure*, without reference to soil, drainage, or culture. It is better, because, other things being equal, it affords in the greatest perfection the conditions of *warmth*, *shelter*, and *aëration*, the importance of which will hereafter be seen. Generally speaking, there is also a choice between the upper and lower portions of a hill-side, and in most cases it is well not to carry the vineyard too far down, since the temperature there is lower, the drainage less perfect, and cold strata of air accumulate which are injurious to the grape. The conditions of a long, warm, uniform season should be obtained as far as possible. These conditions we can never obtain in valleys, or on exposed hill-tops; hence the importance of shelter, and the necessity for avoiding low, wet land, or wet land wherever located. The fact that wild grapes often grow along brooks has sometimes been adduced as an argument against the necessity of selecting a dry, warm soil; but when a grape that a decent man ought to eat has been produced under such conditions, it will be time enough to answer the argument.

Before we leave the subject of shelter, it may be necessary to add a few words of caution. The object of shelter is to protect from winds injurious to vegetation, and to preserve, as far as possible, an equilibrium in the electrical conditions of the earth and atmosphere. We need shelter, but we must have, at the same time, a circulation of air. These injurious winds, experience teaches us, come from northerly points of the compass; hence we must place our shelter at the north, and extend it a little on the east and west; the rest of the vineyard may be left open. We must avoid hedging the vineyard in. The shelter should be sufficient to break heavy winds; in some cases a single row of Norway Spruce will accomplish the object fully, while in others more will be needed. It is not necessary that this shelter should be in immediate contact with the vineyard; it should in no case be so close that the roots of the trees will encroach on the vines. If this should happen, a narrow trench parallel with the trees should be made, and kept open. As the conditions under which shelter is to be afforded will vary somewhat in different localities, a good judgment must be brought to bear on the subject in all cases.

A few words may be added in reference to cities and their suburbs. The buildings and fences in these places usually afford all the shelter that is needed; in cities, indeed, it is sometimes present to a degree that is injurious, the circulation of the air being almost entirely prevented. As a general thing, however, our suburbs and villages present, in the way of shelter, just the condition for growing grapes in the highest state of perfection. That this is not generally done is owing to a bad preparation of the border and improper pruning.

We have said enough of shelter, we trust, to impress the reader not only with its importance, but its absolute necessity. There is probably but one other branch of the subject of more importance to the vineyardist or the amateur, or even to the person who grows but a single vine. There is a greater necessity for shelter in a cold climate than a warm one, but our conviction is, that some form of it is beneficial every where, even at the sunny South. Each man, of course, must judge of the necessities of his own case, but he will act wisely if he locates his vineyard in reference to this important point of needed shelter.

Our next will be on the *Soil and its Preparation*. We propose following the

subject regularly through all its gradations up to the ripening of the fruit. As the grape has been a study with us, the reader may at times find us a little positive; but that remains to be seen.

LANDSCAPE ADORNMENT, NO. IX.—THE BEAUTIFUL AND THE PICTURESQUE.

BY GEO. E. WOODWARD, CIVIL AND LANDSCAPE ENGINEER, 29 BROADWAY, N. Y.

Among modern landscape gardeners the natural style of landscape adornment is divided into two somewhat distinct branches, and are designated the Beautiful and the Picturesque; and although frequently used in common, the desire is to separate or use them for strongly marked differences on the same estate. Thus the beautiful is made use of in embellishing the dress grounds, while the picturesque is considered the most appropriate for those natural forms whose outlines are irregular, and in which no display of art is contemplated. The propriety of blending these two varieties of the same style has not met with very close consideration, or perhaps the sources from which they have evidently been derived have not received that study to which they are entitled.

We like to go to the fountain-head of all subjects that are worthy of investigation, as the most likely mode to develop the hidden meanings that a succession of derivations either overlooks or casts aside; and although our theory in this case may be false, still it is likely to lead to other and perhaps better conclusions.

The natural style of landscape gardening is founded upon the teachings of nature; her examples and hints, assisted by a refined and cultivated taste, are the most productive of pleasing results.

If we study nature closely, we find the two forms of natural landscape adornment plainly illustrated, and we also find them blended in the most harmonious manner; the rough, jagged rock is not out of keeping with the graceful catenary curve of the drooping vine, nor the splintered and twisted oak with the helical curve of the twining vine; the peaceful lake harmonizes with its bold, rock-bound shores as gracefully as where its waters meet the closely shaven lawn, and the beautiful curve of the parabola described by falling water is not inappropriate to the wild gorge. It would appear reasonable that there should be some connecting links or graduations between the infinite beauty of natural curves, and the broken, irregular forms of the picturesque, and that the place of departure from one to the other should be from the straight line; but there are no straight lines in natural forms, no natural illustration of their existence, and we must therefore conclude that any form of construction in landscape art that deals with materials in their natural condition, and introduces the straight line, is at variance with the natural style of landscape adornment; and, however appropriate it might be in that style which is wholly artificial, a true course of reasoning would condemn it in one wholly natural. The use of a natural curved line implies a high standard of beauty, as it expresses more beauty than a line of any other character. The eye curve of the common *soi disant* landscape gardener might be tolerated in the picturesque, but it is false both in principle and practice, and utterly worthless (excepting by guess work) on uneven ground, or on that which is thickly wooded; besides, in adopting any curve which is not a natural curve, we sacrifice the highest form of beauty. The lines of the "Beautiful" are derived from natural curves, and

the beauty of natural curves differs only as one star differeth from another. They may be derided by being called mathematical; so are all lines and forms mathematical, and it is utterly impossible to produce any true style of landscape gardening that shall not be mathematical; a fact so apparent, that a further consideration of it in this light is unnecessary.

The use of curved lines of a natural form might be objected to among practical men as being difficult and expensive to lay out. Practical tests, however, show that a curve laid out by the eye is the most costly as well as the least satisfactory; one is known to be correct and infinitely beautiful, the other carries with it a feeling of uncertainty, and can only approximate to true beauty. Although a curved line, which derives its exquisite grace from its natural model, is perfect in grace and beauty considered by itself, any use made of it that does not carry a good and sufficient reason with it, must be condemned when good taste is considered. That road is not beautiful which curves unnecessarily for the sake of the curve, and that which is already beautiful may easily be distorted and made positively disagreeable by the addition of a very beautiful feature. There should be in all departments of landscape art an expression of value, either of beauty, usefulness, or pleasure; whatever means nothing is much better dispensed with. The use of embellishments is good so far as they express a purpose; beyond that they only serve to point out an uneducated taste. Artificial ornament or decorations, misapplied, are as false in landscape art as in architecture; they cease to be beautiful if the motive is not apparent.

Strongly as we would advocate the use of gracefully curved roads and walks on ornamental grounds, our disposition is to condemn all unmeaning uses of the curve. There is a grandeur in the single, long, graceful curve of an approach, that withers into insignificance the frittering reverses which a vulgar taste would work out from the line of grace and beauty. Like bold effects, or broad masses of light and shadow, the bold, free, running curve will make its impress; and our opinion would be, that he who seeks to gain long curves which plainly tell the story of their location, gains a point in which he will be sustained by variety, effect, and rare good taste.

In the use of the curve as a line of grace in ornamental roads, we must not overlook other inseparable conditions. The curved belt of smooth gravel is not wholly to display the beauty of alignment, or the contrast with the smooth green lawn; if this were all, it must be a failure. The leading feature of a road must be thoroughly practical, and until the highest degree of usefulness is expressed, it is folly to consider either beauty or ornament. The natural curves most applicable for use in the location of a road, are those which nature shows to be best adapted to the passage of moving bodies, the principal ones being the circular, elliptical, and parabolic; but, as compound circular curves, practically considered, are identical with the last two, we should adopt them as combining the perfection of beauty and usefulness, and as displaying that graceful flow so essential to tasteful adornment; it is quite necessary to add, that even and regularly adjusted gradients are the only ones in keeping with such a line of road, the picturesque grades of rural roads and walks being inadmissible.

Our own disposition would be to abandon entirely the use of picturesque lines in road-making, as we can not see the philosophy or economy of building second rate roads through picturesque grounds. The pleasure in using a road decreases in proportion with its character, and if the lines of the beautiful are in keeping with the lines of the picturesque, why should they not be preferred, more especially as they combine the practical and ornamental? Generally speaking, the

improvement of picturesque grounds does not extend beyond roads and walks, and a few rustic embellishments, such as seats, bridges, etc.; any other attempt to interfere with nature will not meet with success. Too little can scarcely be done to natural grounds, nor too much to the highly dressed grounds. There are but few examples of landscape adornment that rigidly adhere to either the beautiful or picturesque; numberless experimental attempts have been made combining both, always failures that mean nothing, and are generally produced by working up the picturesque and neglecting the beautiful until they meet on a common level; it is then difficult to distinguish between them. In the hands of educated taste, the beautiful and picturesque can be harmoniously blended, and there may be any degree of excess of one over the other that is desirable; but he who can not appreciate the beautiful designs of nature, and has not good sense enough to let them alone, or aid her to complete them, lacks one of the qualifications of a landscape artist.

PLANTING.

BY C. W. GRANT, IONA, NEAR PEEKSKILL, N. Y.

The rules for the planting of fruits are simple and of almost universal applicability, from the herbaceous strawberry to the strong wood of the Apple-tree; and yet more loss by death occurs from negligent or mistaken planting, than from any other cause. In consequence, not only does the purchaser sustain great disappointment and loss, but the seller often much more severely suffers in the reputation of his plants. A new tree may replace the buyer's loss, but the seller's loss is not so confined in limit, nor is it nearly so easily remedied. For all practical purposes, it may be assumed that a good tree or plant will never die except from bad treatment; and the converse is to a great extent true. No tree may be expected to prosper under negligent treatment.

In considering the points of good treatment, the soil may be first noticed. None but good fertile soil, that has been well "aërated" or "weathered" by lying near the surface, should come in contact with the roots; and this, although it need not be sifted, should be fine enough to pass through a sieve. Nothing that is properly called manure should be suffered to come near the roots. Manure that has, by repeated workings in the compost heap, so far returned to the condition of very rich soil or mold as to be destitute of odor or acridity, may be thoroughly worked into the soil that is to lie below the roots, but not so near as to receive their early growth. This may also be placed above them, and in the same relation. Good fertile soil affords the best possible medium in which to obtain a good healthy growth. Its mechanical condition must be observed, having it neither too clayey nor too coarsely or openly sandy. In this a great range is allowable in almost every thing that is planted, only the very adhesive soil must have its compactness frequently broken by working, and must always contain enough of vegetable fibre or mold to secure the porosity that will allow water to pass through it with a due degree of facility.

The sandy soil, on the other hand, must not be so open, in the first place, as to let its fertility fall away and be lost; and it is equally important that the roots shall have sufficient protection from the direct action of the atmosphere. Soil may be so open that roots will tend to take the action of surface wood, and cease

to perform their functions. In many cases not only is the roller indicated over the general surface, but particular attention called for in compressing the soil about the roots. For such cases, a plentiful addition of pretty adhesive compost is the only effectual permanent cure. On very open soils, Apples, Pears, and Grapes will often at first exhibit surprising vigor, but fail, and even die, after the first effort at the production of a crop. A well-prepared hole or border will always obviate this, and from such ground accelerated ripening may be expected to counterbalance the additional care required.

When remarkable vigor is desired, it is best attained by placing well-rotted manure over the roots, with at least two or three inches of intervening soil, so that it may reach their mouths in mild solution; but it may be remarked, in passing, that the most healthful and permanently productive vigor is obtainable by care in cultivation only, without extraordinary enrichment or any forcing process. The normal energy of vegetation will work out its best results, both in the formation of strong, healthy wood and abundance of excellent fruit, when its daily wants are always fully supplied, without ever having the supply in excess. The leaves, by their development and firm, fleshy texture, or the contrary, will very clearly indicate the quality of the expected result, and the great desideratum is to produce an abundance of foliage that shall endure the whole season.

While aiming at the attainment of the judicious mean in planting, it should be borne in mind that too rapid growth at the beginning is as injurious as if it were too weak, and that the means of sustaining a uniformity of growth for a long or indefinite period must be provided for at planting.

The depth of planting is always regulated by the depth at which the plant previously grew. Many kinds have great power of readjusting the "collar" or point where root joins surface-wood, and the age of the tree or plant has something to do with the ability to sustain a great shock to its nature in this respect. Those that root readily as cuttings are least likely to be destroyed by too great depth; but countless numbers of pears on quince stocks and young grape-vines are killed yearly by this cause. The Plum and Peach, particularly in heavy soils, if not killed at once by great abuse in this way, are doomed to a languishing and unproductive existence. It is unnecessary to speak of the kinds which suffer most, for all are greatly injured by disregard of this rule. Even when the intention is right, trees that are planted in recently prepared borders or holes that have been deeply worked are often subjected to this disaster, from settling of the ground after they are planted. This should be provided for by making the soil sufficiently compact below the roots before the trees are set. Young and valuable vines are most frequently of all destroyed in this way; and those which have the best and most abundant roots are more in danger than those which are scarcely more than cuttings. It is desirable, and often indispensable, to have the principal roots of the vine below the severe action of frost, or rather alternation of freezing and thawing, as well as sudden drought. Hence for the vine a special plan has been adopted, which secures always the best results when it is carefully carried out. If the ground has been recently prepared, it needs the compacting spoken of for trees, so that it will settle but little, if at all, during the first season. An excavation is then made, at least six inches in depth, and better if eight, or, in very light soils, ten, and considerably greater in diameter than will give uncramped entertainment to all of the roots that remain after the root pruning, which is always required in well-rooted plants. This soil is to remain in a heap during the season, and the present surface of the hole is to be considered and treated as *the*

surface in reference to the vine for the first season. To plant the vine, another excavation is made to the depth of four or five inches, and the soil is returned to cover the roots, thus leaving an excavation of the depth above mentioned for one season. At the end of the season the remainder of the soil, or that which was first thrown out, is put back, and from this depth the vine will not receive any apparent check to its growth, and its roots will be kept below the destructive influence of frost or drought.

If the hole is filled up at the time of planting, the vine will be nearly or quite destroyed, or "smothered," as gardeners say. The partial filling up of the excavation that will occur from the breaking in of the sides during the summer, and especially from heavy rains, will be productive of no injury unless it occurs early in the season, when it must be removed. If the soil that is thrown out for the lower depth is unsuitable to come in contact with the roots, it should be spread over the surface of the ground, and good surface soil substituted.

In placing the roots, care should of course be observed to give them the right direction, so that they may be equally distributed through the soil; and in working the soil in around the roots, the fingers must be employed, to do it well. The roots of vines or trees should be placed just where they are to remain, and the soil so firmly placed around them that no cavity among the roots will be formed by settling. All shaking or churning of the tree or vine up and down to get the soil among the roots, should be avoided. None but fresh, moist soil should go into the hole in filling up, and the degree of compactness must be regulated by the character of the soil, that which is sandy *needing* much compression, and that which is very clayey *admitting* but little. At the time of planting, a stake or stakes should be set so as to secure the tree from moving by the wind. Much motion of the top will draw the roots in the soil, and deprive them of their tender fibres.

Vines also should receive the stakes that are to sustain them at the time of planting, for there is danger of injuring, or even destroying, by damaging the roots in setting them afterwards.

In giving these very particular directions for planting, I have had in mind not the thoroughly trained gardener, but purchasers who, in a great majority of cases, are not only negligent and ignorant themselves, but commit the matter to those who are not only utterly unskilled, but have no feeling of interest in the result. These latter are not to be reached by an exhortation in magazine, but the purchasers of trees and plants should be heedful readers of that which deserves their attention, for they have both an interest and a responsibility involved, with corresponding duties from which they can not absolve themselves.

The duty of furnishing our loved ones who are dependent upon us with wholesome and refreshing fruits, is not fulfilled by the mere *purchase* of trees, but demands all the care which is required to place them in perfection abundantly within their reach. The purchaser of every tree and vine by the act incurs an obligation to another party, which in ninety cases in every hundred he wholly ignores, practically at least. He has a lively appreciation, and justly too, of the obligation, both expressed and implied, of the nurseryman to him, and cherishes a large amount of that expectation, which a fairly estimated average of humanity, under the circumstances, would scarcely warrant. He is often disappointed, and clamors—justly.

He ten times more frequently fails through gross negligence or fault on his own part, and he clamors often even more loudly, and the reputation of the nurseryman is damaged without remedy. On the one hand it is called

"robbery;" on the other it is robbery also, but so much more than robbery that language fails to characterize it.

The one withholds a rich, sensuous delight, refreshing to body and spirit, and enacts a great injustice. The other takes the bread which sustains the body, but, infinitely more, that which sustains the heart and mind, and wanting which, every undertaking must be without that life-giving soul which alone ennobles it, and secures the conscientious employment of MAN'S ability.

One important element of success in planting is so generally ignored, that I would call particular attention to it; that is, fall transplanting and "heeling in" for the winter. That this should be so little heeded by nurserymen is not easy of comprehension. Many of our most hardy pears—or those which become so after the second year—are exceedingly liable to damage or destruction by the second winter. The Bartlett may be mentioned for an instance. Our chief object now is, not to speak of guarding against occasional loss, but to point out the means of universal gain. All fruit-bearing trees and vines (and we might safely make the rule much more comprehensive) are greatly benefited by the process; VINES particularly so. For these, in addition to the other advantages, there are two that deserve particular consideration. First, the roots are in best condition to endure uninjured transportation to a great distance. Second, their vegetation may be kept back until ground that is wet and cold, or that which has been recently prepared, is in the best condition to receive them, so that growth shall go on immediately without interruption.

The full consideration of this subject demands an entire chapter for its elucidation; and after this is well understood, the question as to propriety and comparative advantages and disadvantages of fall and spring planting will be nearly disposed of; or, rather, will be so readily understood that the manner of obtaining the advantages of both will not be a disputed question.

[The reader will find several strong points made in the above, which are worthy of special attention. Too much stress can scarcely be laid upon the preparation of the soil, especially in planting orchards and vineyards which are expected to last for generations: no after surface treatment whatever can compensate for neglect in this one particular. Not less important is planting, as respects depth, disposition of the roots, and filling in. We have heretofore expressed our conviction of the evil of deep planting, especially in reference to dwarf Pears: it has had more to do with the failure of dwarf Pears than any other one thing that can be named; deep planting, indeed, may be called the "great evil" in pomology. The settling of the soil is another matter bearing on this subject, to which attention is very properly called. A tree properly set, in a well-prepared soil, will not settle more than an inch, and this, too, without stamping or pounding the soil with the foot. The filling in immediately around the roots should consist of soil broken up finely with the spade or the hand, and should be prepared beforehand. The soil should be worked in around *all* the roots with the *hand;* no man, indeed, should attempt to plant a tree unless he is willing to put his hand to it. Planting, again, should never be done when the soil is *wet;* it is in good condition, in this respect, when it will break up readily in the hand. It will be seen, too, that stakes, when necessary, are recommended to be put in at the time of planting, and this is important; for in putting them in afterward the roots are not only often injured, but the whole of them are frequently drawn and displaced, to the great injury of the tree. Swaying to and fro, and "churning," to settle the soil about the roots, are practices that can not be too strongly condemned; it is our

"private" opinion that a man who does these things ought to be "spanked." Whatever is done in the way of planting a tree ought to be done in the most thorough manner. A man who purchases a good tree thereby assumes the moral responsibility of providing suitably for its future welfare.—Ed.]

CLUB-ROOT IN CABBAGE.

BY A JERSEY MARKET GARDENER.

It is just as much the province of a horticultural journal to disabuse the popular mind of an error, as it is for it to advance a new or improved system of culture. One of the most general and deep-seated of these errors is the notion that the cause of this troublesome feature in the culture of the cabbage crop is in consequence of using hog-manure as a fertilizer.

I will briefly state a few facts why we consider this a radical error. In the district from which I write I presume there are at least two hundred acres annually under cabbage crop, embracing every variety of soil, from light sand to deep clayey loam, and yet in every case we have "club" if we plant cabbages on the same ground two years in succession, *except on lands wherein the soil is impregnated with oyster shell:* there we may plant successively for fifty years and never see it, and that, too, without any restriction about manure. On the other hand, I have (for convenience) used cow-manure solely on one of my places, and in another, horse-manure, largely mixed with hog-manure; and yet, whenever we, by accident or otherwise, transgressed the rule of planting only in alternate years, just so sure were they affected by club-root, in both places alike. This, of course, only on ground where there was no oyster shell deposit.

Reasoning from these facts, our theory is, that an insect is in some way attracted by the cabbage plant when growing the first season, but is then powerless to injure; but that it then deposits its eggs in the soil, which forms the insect ready to attack the roots on being planted the succeeding season. We can not vouch that the above is correct, but the facts seem to point to no better solution. We explain the exemption from club-root in soils containing the deposit of oyster shell by the belief that the insect can not exist in contact with lime; therefore we have long since come to the conclusion that the reason of club-root in cabbage is solely caused by *an absence of lime in the soil.*

Being so thoroughly convinced that the above is the only and true cause of annoyance, we have for the past two seasons used lime extensively, (at the rate of one hundred bushels *unslacked* oyster shell per acre,) and the results, thus far, convince us that there is no doubt that we can thus artificially form a soil where cabbages or cauliflowers can be grown successively, without the attendance of their destructive enemy, club-root.

The successful growing of this crop in this district is of more importance than many are aware of. The two hundred acres annually devoted to cabbages will average five hundred dollars per acre, or something near one hundred thousand dollars for the whole. This is only from one Jersey district. New York island and Long Island, I presume, will figure up as much more.

I hope I have not forestalled my quondam friend, Mr. Roessle, of celery renown, in divulging his "secret" of "how to grow a cabbage crop without club." But he seems to be so long in thinking about it, I was afraid the "interested"

public would be getting impatient, and so let the cat out of the bag; but whether or not it is his "cat" I am unable to say.

[We think it has been sufficiently demonstrated that the "club-root" or anbury is caused by a species of curculio, and that hog-manure has nothing to do with it. Such being the case, we should naturally expect "club-root" to prevail in proportion to the number of years cabbages are grown on the same piece of ground; provided no suitable remedy is applied. "A Jersey Market Gardener" here tells us that *shell lime*, according to his experience, is a certain remedy; and, knowing him as we do, we have the most implicit confidence in every word he says of his own knowledge. The announcement of a sure remedy for this formidable disease will be of incalculable value to a large class of our readers. Whether he has forestalled Mr. Roessle we can not say; but, Mr. Jerseyman, when you undertake to play with "cats" you must look out for a "scratch."—Ed.]

IMPORTED ROSES.

BY ANDREW S. FULLER, BROOKLYN, L. I.

In this country the propagation of the Rose has been much neglected until within a very few years. We have been supplied mostly by importations from Europe; but we look for better things in the future. Of course, we shall be obliged to import new varieties so long as we neglect to produce them ourselves, or allow our simple vanity to get the better of our judgment.

We have always given the preference to a plant that was brought out in Europe over those of our own country. The Madame Trudeaux Rose, which originated in Bloomingdale, N. Y., was christened with a French name, then sent from New York to France, and there made known to the world, before Americans could be induced to purchase it. This is but one case among the many that are constantly occurring, to the chagrin of those who get a peep behind the scenes.

The question for us to consider at the present time is, how shall we supply ourselves with good, strong, well-grown plants? Shall it be by importing them, or shall we grow them ourselves? Are the imported plants better than those grown in this country? Again, can we import them cheaper than we can grow them? We think not, for several reasons; and we believe that the best way for us to get a good supply of roses is to turn our attention to their propagation, and give up importing altogether, excepting for the purpose of obtaining new foreign varieties.

The stock on which the French nurserymen bud their roses is enough to condemn them from the beginning, as they generally use the wild rose of the woods, which is dug up by the farmers about the country, and sold to the nurserymen for a mere trifle. These stocks are almost destitute of small fibrous roots; yet they seem to possess vigor enough to produce a very good growth for two or three years after being transplanted; but after that they are of very little use. Taken as they are from the shade of the forest or hedge-rows, and planted in the nursery, where they are exposed to the scorching sun, the bark becomes so dry and hard that it refuses to expand, or allow the wood to increase in size, or the sap to circulate. When they have been exposed to one long sea voyage, there is but little left of the original vigor they may have once possessed.

The roses that we get from France on their own roots are generally very small and weak, and they suffer much in transportation; besides, there are but few varieties that grow as strong or bloom as well on their own roots as when budded on good strong stocks.

Some of the English rose growers use the Manetti stock, (which is the best kind known;) but they ask more for their plants, which are not generally as large or as well grown as those we get from France. Besides, the change from the cool, moist climate of England to our hot and dry one often produces a deleterious effect.

The risk of loss by sea voyage is one great drawback in importing roses; for it often occurs that we sustain a loss of one-half, either by their becoming too dry or too damp. If you have a package of choice varieties, the rats will be pretty sure to get at them and make sad havoc. We must meet these losses with as good grace as possible, for we can get no insurance against rats or long voyages.

The relative cost of imported roses and those grown here is worthy of our attention.

First-class, large, two-year-old plants, budded on the Manetti stock that has been twice transplanted, can be bought here for two hundred dollars per one thousand. Now let us see what it costs to import the same number from Angers, in France, which is supposed to be the Rochester of Europe.

1,000 plants cost - - - - - - - - -	$70.00
2 boxes, and packing, - - - - - - - - -	8.00
Freight from Angers to Havre, including insurance, -	16.00
Freight from Havre to New York, per steamer, on 2 boxes, of one ton each, - - - - - - - - - -	40.00
Custom-house charge, - - - - - - - - -	1.50
Total, - - - - - - - - - -	$135.50

This is about the average cost, one year with another.

We have but about six cents difference in the cost of each, and this in favor of the imported plants. But who will say that the plants grown here, if of equal size, are not worth far more than the difference in price, to say nothing of the risk in importing them? Our experience leads us to believe that the plants grown here are worth double those imported.

This is no hasty conclusion, but one we have arrived at by dealing in both kinds for the last ten years. We have found that the imported plants did not give satisfaction to our customers, while those that were grown in this country have; and the great question with all nurserymen should be, how best to please their patrons.

[It is undoubtedly true that our nurserymen depend mainly on the foreign supply for their stock. Many believe they can import roses cheaper than they can propagate them, and are governed chiefly by this consideration; but Mr. Fuller's figures would seem to show that the saving is not very great, after all. There are comparatively few successful rose propagators among us; not alone because the rose is difficult to propagate from cuttings, but because they will not take the trouble necessary to insure success. We have no doubt at all that, on the whole, roses grown here are more durable and give more satisfaction than those imported, especially those on their own roots. Unlike Mr. Fuller, we believe roses on their

own roots are in most respects to be preferred to those budded. A few feeble growers may be better budded, and this may be what Mr. F. means. But, at all events, let the domestic trade be encouraged.—Ed.]

GRAFTING THE GRAPE-VINE.

BY GEO. W. CAMPBELL, DELAWARE, OHIO.

I was both amused and interested in reading the article in the January number of the Horticulturist in which "El Medico" records the serious difficulties attending his attempts at grafting the vine. And I may add, that my own experience in that line for several years would furnish a chapter of failures but little short of his. I think I grafted a few vines every season for a period of about five years, and during the whole time succeeded in making but *one* grow and form a good vine; and this *one* only by disregarding the usual directions given by professed experts. Instead of waiting for the formation of leaves and discontinuance of the excessive flow of sap, *I grafted this one early*, before the flow commenced. Since that time I have grafted thousands of vines, with nearly as good success as attends any other kind of grafting. I have practised saddle grafting, whip grafting, and several fancy methods, but have found the common cleft grafting, carefully performed, the most reliable and successful. For large, strong stocks I hardly think tying necessary, though a covering of clay or grafting-wax is undoubtedly beneficial. For smaller stocks, I use only paper covered with grafting-wax on one side. I could not recommend copper wire in any case. I have also grafted on various stocks, with very little difference in result, using indiscriminately the wild frost-grape of the woods, the Catawba, Isabella, Concord, and some others. I think if "El Medico" will carefully set his grafts early in the spring, before the great flow of sap commences, he will be able, another season, to make a better record. I do not say grafting the vine *can not* be successfully performed after the leaves have formed; but it is a fact that, up to the present time, notwithstanding many trials, I have never succeeded in doing it.

[At last, El Medico, you have an authority that will let you graft as early as you want to. We feel under obligations to keep you posted. Try all, and gather material for another chapter.—Ed.]

CULTURE OF THE DAHLIA.

BY ANDREW RICHARDSON, FORDHAM, N. Y.

Dear Editor:—I wish that by a word of mine I could raise an army of amateurs that would infuse some additional vigor and emulation into the cultivation of the noblest of our autumnal glories, the Dahlia. I find the principal objection to a more general cultivation is, "*Oh! too much trouble and difficulty!*" Now in my floral vocabulary there are no such words, and it is with the view of dissipat-

ing this erroneous impression, as well as to induce others to take hold of the delightful pastime, that I offer you my system of culture, which is acknowledged to be successful; and instead of "trouble and difficulty," I guarantee to all who will follow it not only equal success, but the purest and most positive pleasure. That a certain amount of labor and attention must be bestowed is undeniable, but little more than is necessary to most of our floral pets when properly cultivated.

Amateurs, who have space only to grow six, twelve, or twenty-four plants, may, by devoting an hour morning and evening to their requirements, do all for them that is necessary to insure a good bloom. Others, with more time at their disposal, and who enter *con amore* into all the minutiæ of the thing, must necessarily reap a corresponding advantage—a larger amount of gratification.

As we may in vain look for a good or true bloom from a weak, sickly plant, our main object, during the three months after planting, must be to produce strong, healthy, robust plants, to insure which, our first attention must be turned to the preparation of the ground.

Select an airy situation, away from large trees, and as much as possible a *dead level;* trench it a couple of spades deep—*more*, if you take pleasure in it, as I do, my Dahlia ground being three spades deep; keep all the good soil on the top, the subsoil being merely opened up and allowed to remain in its place, forming a large receptacle or reservoir for the rains and waterings the plants may receive. Such preparation will save *many waterings* which otherwise would be necessary, and where, perhaps, water might be scarce. As an instance of its great advantage, last season we had a two months' spell of dry weather—not a shower to wet the surface of the ground; notwithstanding, my plants grew vigorously without once being watered, and without showing the least indication of suffering during the entire drought, all they had being an occasional syringing overhead to check the red spider and thrip, which warm and dry weather is certain to produce, and which must be checked to insure healthy plants. Besides, when we consider the fact that water constitutes upwards of 70 per cent. of the substance of the plant when in a healthy growing state, we at once perceive not only the advantage, but the necessity for deep trenching. This said trenching, which is the heaviest portion of the whole process, should be done in the fall of the year, leaving it as rough and open as possible to the action of the frost. If not done then, begin operations the moment the ground is workable in spring, leaving it in said rough, open condition till it is wanted in May.

In the meantime, prepare a sufficient quantity of manure, as much as will cover the entire surface three or four inches deep; the older you can get it the better. *Cow*-manure is preferable to horse, it being of a cooler nature; but as it can not always be had pure when wanted, we must take what we can get, *mixed* with horse; or horse alone, if sufficiently decomposed, will do well enough in the absence of better, as a foundation to work upon. My muck-pit, before the season is over, is pretty well filled with all the offal and refuse of the house and garden I can scrape together; nothing is lost or thrown away, but all returned again to the ground whence it came. In the fall, I get a few loads of *cow*-manure if I can, *horse* when I can not, and in November make up a heap alternately of a layer from the muck-pit and a layer of manure, allowing it to remain so all winter. In early spring it is chopped down and turned over, thoroughly intermixing it, and again formed into a heap. In six weeks the same process is repeated, when, by the time it is wanted for the Dahlias—about the middle of May—it is in prime condition; much of it corn, dahlia, and hollyhock stalks, being but half decomposed, not only

tends to keep the soil free, but we can give the Dahlia nothing that its roots will more lovingly cling to and feed upon.

We will now leave nature to perform her portion of duty to the ground and manure heap, while we are looking after the roots. During the last week in April, when there is no longer any likelihood of frost, I dig a shallow trench in any bit of ground not immediately wanted, and place the roots in it closely together, working the soil carefully in among the tubers until the crowns are covered about half an inch. In about a fortnight or three weeks the shoots begin to appear, and when three or four inches long, I lift the roots, and carefully separate the shoots, leaving a small portion of the tuber to each when it is possible. They are then put into small-sized pots, no larger than will freely admit the portion of bulb attached, using a mixture of leaf mold and road sand, half and half, passed through a sieve. Stick a tally with the name into each pot; give a thorough watering (use rain water) with a fine rose, and when the foliage is dry, place them in a cold frame; shade from the sun, and keep air from them two or three days; then give them air daily, by raising the upper end of the sash a couple of inches, closing it again at sundown. Keep a good look out for thrips, which will find their way in and do damage, if not destroyed. Should the weather be warm and dry, and evaporation consequently considerable, give the foliage a gentle sprinkling. Examine daily the soil in the pots, and water those only that require it, guarding against too much, which would certainly damp them off at this stage of their existence. Morning is the best time for this application of the watering-pot, fortifying them against the heat of the day, and, with a current of air playing gently among them, they are in fine condition for closing up again at night. In dull, dark weather, give plenty of air, and, should a moderate shower come up, let them have the benefit of it. In ten or twelve days they should be pretty well rooted, and ready for change of quarters. Examine each pot, by placing one hand over the soil, allowing the stem of the plant to go between your fingers; turn the pot upside down, give it a tap on the side of the frame, when the ball will rest on your hand exposed to view; if the roots are through the soil, "all's right;" no more nursing is required; return it to its pot, and place it where it can only get the morning sun for a few days, watering it well; after which it may be exposed to sun and weather as they may come. *It is ready for planting out.*

Such is my amateur method of making young plants; and I seldom lose one, particularly since I have used "frigi domo" as a shading material. It is a thin, soft substance, like flannel, composed of hair and wool, an excellent non-conductor, preserving a cooler and more equal temperature than I have before obtained with mats or muslin, and admitting a soft, agreeable light.

While the plants are rooting and hardening off, let us return to the Dahlia ground, which we left in a rough condition. Level it down, and point in the quantity of manure already mentioned, mixing it well with the soil. Let me again impress the advantage of working the ground to a perfect level, that the rains and waterings may run *into* and not *off* it, and that the roots all around may enjoy equal advantage.

Divide into beds four feet wide, allowing a pathway of sixteen or eighteen inches; then along the middle of the bed drive firmly into the ground centre-stakes five feet apart, close to each of which plant a Dahlia, any time from the 20th —not sooner—of May to the middle of June. A point of great importance is, from now to the end of the chapter, to be strictly attended to. After the completion of the beds, *never allow a foot to be placed upon them;* let the driving of the stakes and planting be done from the pathway, *making a long arm;* nothing

being more detrimental to success than an undue pressure on the roots. To facilitate operations, place a *brick* in the centre of the bed between each Dahlia as a stepping-stone, nothing more being necessary for free and easy movement among the plants, which will soon grow to within easy reach.

For the benefit of beginners who desire to purchase young plants, I give you a list of a few of the *older* varieties—but nothing the worse for that—which I can with confidence recommend, having proved them, as well as many other names which are at your service, to be well adapted to this climate, and may be had from any importing nurseryman at a moderate charge.

Triomphe de Roubaix, buff, white tip; large and fine. Dr. Bois Duval, scarlet; a splendid flower. Sir H. Havelock, brilliant scarlet; best of its color. Lady Popham, white, lavender edge; most exquisite. Baron Alderson, scarlet, white tip; large and splendid. Grand Duke, deep lilac; very fine. Mrs. Edwards, lilac; very symmetrical and constant. Prince Albert, white, purple edge; constant and good. Lollipop, salmon buff; splendid form. King of Yellows, clear yellow, and very constant. Miss B. Coutts, fawn; fine form and substance. Dr. Gully, yellow, crimson tip; fine. Imperatrice Eugenie, pearly white, crimson tip; *extra extra*. Lady Paxton, red, drab tip; extra form and substance. Cherub, brilliant orange; a gem. Empress, blush white; delicate and fine. The Nigger, very dark; constant. Preëminent, dark plum; rich and very fine. Anne Boleyn, white; a noble flower. Duchess of Wellington, creamy white; extra double. Lord Bath, dark maroon; fine form. Ruby Queen, bright ruby; fine form. Miss Caroline, white, laced with purple; good and constant. Princess Wagram, orange; very desirable. Colonel Wyndham, dark red; first-rate.

To those who wish to add to their collection *newer* varieties, I can equally recommend the following:

Madame Alboni, lilac, tipped with white; extra fine. Chairman, pale orange buff; first class flower. Lilac Queen; finest of its class. Marchioness of Aylesbury, white, purple edge; very fine. Sir C. Campbell, dark maroon; large and very fine. Daughter of the Morning, mauve; a perfect gem. Pandora, claret, bronze tip; large, constant, and fine. Mrs. Bailhache, pure peach; extra form and substance. Dandy, white, striped with rose; original and fine. Kean, crimson, tipped with white; extra fine. Hon. Mrs. Trotter, white, with picotee edge; extra fine. Lady Mildmay, pure lilac; very good. Sir Joseph Paxton, golden yellow, first class.

[The above article, from one of the most accomplished and successful amateurs in the country, we welcome with peculiar gratification. The question has often been asked, "How does Mr. Richardson grow such Dahlias?" and as this article is to be continued, our readers will be put in possession of all the details.—Ed.]

NATIVITY OF THE DELAWARE GRAPE.

BY G. H. B., NAZARETH, PA.

Mr. Editor:—It is really amusing to see the various and conflicting notions about the Delaware grape; but, depend upon it, it is nothing else but a North American native grape. Any one who is accustomed to see large collections of

the foreign grape (*vinifera*) growing in the open air, (under glass they do not develop their characteristics,) will see at once that the home of the Delaware is in the *Occident*.

The grape-vine has been my hobby from my earliest childhood; and I have therefore always paid particular attention to it, not only in my native country, (Germany,) but also in France, Spain, Italy, and Switzerland, as also during my little stay (forty-two years) in Pennsylvania. Here I have cultivated, during the last thirty years, on a piece of ground one acre and a quarter in extent, and trenched throughout three feet deep, several hundred kinds, with the hope to find one variety at least that would suit our climate, but without success. I have one variety, which I imported with fifteen others from the Cape of Good Hope, which does tolerably well, only it is too late for the climate of Pennsylvania. Now among all these, and also those which I have seen abroad, there was not one that looked like the Delaware, or any other American grape; and if that vine in Frenchtown was imported, it does not prove, therefore, that it was a foreign variety. I have myself received by importation from the Baumanns, at Boll-viller, France, and Bronner, Germany, American grape-vines (Isabella and Major Long's) with foreign names.

But I believe that the Delaware grape may yet be found growing in its wild state somewhere on the Ohio, as Doctor Schoepf, (the botanist,) who travelled in the United States during the years of 1783–84, found a grape on the sandy shore of the Ohio River, near Pittsburgh, the description of which corresponds exactly with that of the Delaware grape.

The Catawba, which then was called the Cherokee grape, was cultivated, with many others, at Bartram's Garden, and the York Madeira he found wild near Baltimore.

One of your correspondents believes that the Delaware is a seedling of the Traminer, (of which I have cultivated four varieties, the Red, the Black, the White, and the Spice Traminer;) but that is not the case, as no seedling of the Vitis vinifera will do better in our climate than the parent of it has done in the open air, as I know from many years' repeated experience.

Another judges the Delaware wine "equal to Johannisberg." I am glad to hear it; he must be one of the favored ones if he has tasted true Johannisberger, as that article travels to the cellars of kings and princes exclusively. But to have an idea of the preciousness of that wine, we have only to take into consideration the price which is paid for it: for instance, the king of Prussia obtained a stueckfass, (a cask which holds about 250 gallons,) for which 12,500 florins were demanded, (twelve thousand five hundred florins.) The Riesling, of which that wine is made, is cultivated elsewhere in Germany, but no Johannisberger is produced. It is the favorable locality to the Rhine, with its warm and sheltered exposition, and the great care to press *none but perfectly ripe and sound berries*, which give that excellence to its wine.

One thing more, and I have done. I do not give this as something new, for there is nothing new under the sun; even the ringing of fruit-trees and grape-vines was already practised by the ancient Romans, and later by the French and Germans, as also the renewal system, which was accurately described on the continent of Europe fifty years ago and longer.

[The above we esteem a valuable and interesting contribution to the "grape question." The opinion of a man who has made the grape a hobby from his earliest childhood, and who has travelled through the principal grape countries of

the world, is entitled to more than a passing notice. The remarks in reference to the Catawba are of peculiar interest; we have other testimony tending the same way, which we shall lay before our readers in good time. We are obliged to you for the German catalogue; we find in it the Catawba, Isabella, York Madeira, and other familiar names.—Ed.]

THE ORCHARD HOUSE.

BY DANIEL W. COIT, NORWICH, CONN.

[The following is an extract from the Report of Mr. Coit to the American Pomological Society, and will be of interest to our readers. We paid Mr. Coit a visit last summer, and are enabled to state that his success is most decided. Nothing could be finer than the condition of his trees, except it be the quality of the fruit, which was large, handsome, well ripened, and of the highest flavor. Many specimens measured nine and ten inches in circumference. We expect to hear again from Mr. Coit on this subject.—Ed.]

"Thomas Rivers, a nurseryman of extensive practice and experience, residing at Sawbridgeworth, England, (well known to our nurserymen,) first introduced to the public this new method of growing fruits, (I say that he was the first to introduce it as a system, with instructions to carry it out extensively.) He published in 1852 an unpretending work of a few sheets, which he called '*The Orchard House, or the Cultivation of Fruit-trees in Pots.*' This work fell into my hands some three or four years later; it was clear, practical, commending itself to my judgment, and I was led to put it in practice by having potted some twenty or more trees; but having then no special arrangement for their proper treatment, they were neglected, became diseased, and were finally abandoned. A year later, however, I took the matter in hand more thoroughly, and ordered a hundred fourteen-inch pots made expressly for the purpose, the bottom being pierced with large holes for the emission of roots; into these pots the trees were placed, consisting principally of peaches, with but few nectarines, plums, and apricots. The results of the first year or two (having had disadvantages to contend with) I pass over, remarking only that for the two years preceding the present, the trees were well conducted for their health, form, and future usefulness, and gave, a part of them, a tolerable return of fruit.

"Having had occasion the past year to erect a forcing house specially for Muscat grapes, I concluded to extend the plan so as to embrace under the same roof a division for a peach house also. The plan adopted was substantially one of the largest class of span-roofed houses recommended by Rivers in the last edition of his '*Orchard House.*' The dimensions of my house are seventy-eight feet in length by twenty-five feet in width, standing north and south. I have only occasion to speak here of the section appropriated to the stone fruits, which is thirty-five feet in length by twenty-five feet in width, a glass partition dividing it from the grapery. The entire house is heated by Hitchings' apparatus, the peach division with two rows of four-inch pipe, and the grapery with four rows of the same; one boiler furnishing heat for the whole house, though by means of valves each division may be worked independently of the other.

"I now proceed, as was proposed, to show the result of the fruits grown in this house. It has been stated that the trees were in fourteen-inch pots, and three years

set out. They were, besides, judiciously cut back, to give a compact, well-formed head. Rivers' instructions in this important particular having been followed from year to year, every tree had an abundance of fruit buds. The fire was lighted the middle of February, and the trees were brought from their winter quarters and placed in position—about sixty in number. Of these, forty-five were the large trees spoken of, and these would have been sufficient—just about the proper quantity to remain permanently; but having some smaller trees, but one year set out in boxes, these, to the extent of fifteen, were placed between the pots for a time. When the house became rather crowded with foliage, they were removed to give a more free circulation of air. The trees blossomed uniformly and profusely in April, and soon after set their fruit in much greater quantity than was necessary. The thinning process was commenced early, but was not concluded until the stoning was supposed to be over, and all fears from dropping were at an end. This remark as to the setting of the fruit applies more particularly to the peaches and nectarines. The plums did not set quite so well, but yet ripened a fine crop, which remained for weeks ripe on the trees, and were most delicious in flavor. The apricots (three trees only in number) blossomed and set their fruit well, but nearly the whole dropped; they require even more air than the other trees.

"The peach-trees have maintained perfect health, the foliage fresh and vigorous, and they have ripened a large crop of fruit, averaging on the older trees about fifty, and on the smaller about a dozen specimens; the nectarines ripened from eighty to a hundred. They have been in eating about six weeks, and in the greatest abundance; for fifteen or twenty days, a peck to a half bushel might have been picked any day. With a somewhat different arrangement in bringing the trees at intervals into the forcing house, the season might be prolonged to three months, or a month longer than the present season.

"As to the size and flavor of the fruit, it has surpassed my best expectations. The Grosse Mignonne, Barrington, George IV., and Early Crawford have given rather the largest specimens, many having reached nine to nine and a half inches in circumference, and the size very uniform on the same tree. A portion of the peaches were removed to the open grounds about the middle of June, to see if they would be improved in quality, but the flavor generally of those ripened entirely within the house left little to be desired. It should be remarked, however, that the house (with large ventilation) was left, after May, open night and day.

"In Mr. Rivers' work referred to, there is no suggestion made of any use of the 'orchard house,' beyond that of getting a single crop of stone fruit from it in the course of the season; and to those who would confine themselves to a cold house, this is all that could be accomplished. Now I propose a modification of the plan, by which all the advantages of the 'orchard house' for stone fruits shall be preserved, while a full crop of grapes may be obtained from the same house the same year. For this, however, the aid of forcing power will be necessary. I should proceed in the beginning just as it has been stated I have done the present season, by starting the potted trees in February by fire heat; early in June I should remove all into the open air, and convert the house forthwith into a retarding house for grapes, filling it with potted vines which had been prepared for the purpose. This growing of grapes in pots is another experiment which has hardly been entered upon as yet, but is destined to very useful results not to be accomplished by vines in borders. It is not generally known that more grapes can be grown under a given amount of glass, from vines in pots two years old, than from vines in the border of twice that age, or in their best bearing condition. In the house already described, thirty-five feet by twenty-five, but twenty-four

vines in the border would find proper room, and these, when fully grown, would not (taking one year with another) give over twenty pounds of grapes to the vine, or five hundred pounds for the entire house; while in pots, three times the number of vines would be equally well accommodated, giving, on an average, ten pounds each, or seven hundred and fifty pounds. This is quite within Mr. Bright's estimate, who says, in his recent work on the grape, that he can now *double* the quantity of grapes in pots that can be grown in the same space in borders; and I have myself, at this moment, Black Hamburgh vines in fourteen-inch pots, with twelve to fourteen pounds of fruit on them, averaging a pound and a half to the bunch, ripe on the vines for two months past. But to go back: I have supposed my house filled with vines and pots in June; in the autumn, as required, the fire would be lighted until the grapes were ripe, say in November. Now is perceived the advantage of this mode of culture. The pots being under perfect control, may be removed to any dry, airy room, where, if there is the means of regulating properly the temperature, the fruit may remain in good condition on the vines through the winter; for myself, in this particular I am well prepared, having extensive front rooms specially constructed for the complete control of the temperature so far as the prolonged preservation of the fruit is required.

"One of the most important considerations in connection with the growing of stone fruits in pots under glass, is the entire protection afforded them from the attack of insects, and from diseases which render their cultivation in the open air precarious, if not impracticable. No atmospheric changes affect them, neither are they subject to yellows, or the curl of the leaf; and the constant course of syringing, which forms an indispensable part of their treatment, protects against the attacks of curculios, as well as of aphis, fretters, thrips, and worst of all, red spider."

THE VERBENA.

BY A. VEITCH, NEW HAVEN, CONN.

In the Horticulturist for January of the current year there is an article on the Verbena, by J. Pentland, Baltimore, which is worthy of attention by the lovers of that flower, as it contains some hints, on their cultivation especially, which, if generally practised, there would be less occasion for complaint of the want of success in growing them. Thus far we are disposed to be complimentary; but in regard to the charges brought against European growers, and English in particular, we humbly think it wholly unprovoked, and therefore might have been spared. It seems to us to have originated in petulance, or disappointment at not being so successful in that line as to set his own, beyond all question, at the top of the list.

If it could serve a good purpose, it would not be amiss, perhaps, to have a little badinage with regard to the very "aristocratic" names European florists sometimes give their seedlings, as well as some of the same class on this side; but as all are agreed that seedlings must have some kind of names, it becomes a question of the most trivial importance as to whether they are designated by the title of lady, lord, or duke, or by belle, Mrs. or Mr. this, that, or the other thing. And we aver that European growers adopt such names, in preference to others, from the fact of their being at hand, current in their countries, and as befitting as any others which could be substituted. "Lady Palmerston" does as well for such a

purpose, and sounds as euphonious, as "Mrs. Cyrus W. Field." And perhaps both are better than "Leviathan," reminding us, as that name always does, of that nondescript creature which a grand old writer says "could not be drawn out with a hook," nor "his skin filled with barbed irons, or his head with fish-spears." Great Britain has as little brag about her as the Great Republic. And, moreover, the English growers do not intend to give offence to their American friends by sending among them plants with such names. Not by any means. And we can tell Mr. Pentland that it is from conventional associations rather than believing that there is much in a name, that such practices obtain among them. So soon as he can raise a batch of seedlings superior to any thing yet out, he may be sure they will give him an order for his stock, utterly regardless of the names by which they may be designated, or what they may cost.

"Are we dependent upon the Europeans for all of our best Verbenas? I answer emphatically, No!" In the name of common sense, what need is there for your being so? You perhaps need not be told that America is unspeakably better adapted to the Verbena than England,—delighting as they do in a warmer climate than that country affords; and it is far more difficult to obtain seed there than here. Does not the fact that you are indebted to European growers for so many of your best varieties imply that there is "something rotten in the state of Denmark," something wrong in the way in which matters are managed here? In England, they have an approved standard for almost all florist's flowers; and seedlings generally, if considered meritorious, are submitted to the censorship of a competent person, or to a class of persons every way qualified to decide upon the merits or demerits of such. When their qualities are tested by reference to such a standard, by the most approved judges in the country, their owners are put in possession of such judgment, which, if satisfactory, is generally appended to their names in advertising them for sale; while those which do not come out of such an ordeal with credit, and there are many such, are consigned to their "proper place." It will at once be seen that this acts as a check on the vender, and a safeguard to the purchaser. Hence the value of a "European opinion." Would it not be well to have such a practice in good working order in this country? Very likely it would be the means of abridging many a florist's catalogue, "a consummation most devoutly to be wished," and sometimes prevent purchasers from being taken in. At present the most of growers seem to rely too much upon their own judgment, (in many cases as good as can be obtained,) and descant upon the merits of their own "bantlings."

"I thank thee, Jew, for teaching me that word."

And just because having originated with themselves, they must be good, and can not be any thing else.

With regard to the criteria by which to judge the Verbena, Mr. Pentland's are good as far as they go, "A constant bloomer, a good grower, and one that will throw its blooms above the foliage of the plant, and that will not fade when the sun shines upon it for the first time." The last point most assuredly ought to have greater weight with him in judging some of the imported varieties, of which he says, "The first sun scorches the flowers, and they give no satisfaction during the whole summer; but toward autumn, if perchance they live, there may be a few good blooms, and before we get another look at them the frost has destroyed them." Why not as well have said that such are not suited to our climate? For in this category there are likely to be many which, in the countries where they originated, with less of intense sunshine than we have here, may be as good as

those which give satisfaction, and, in brilliancy and beauty of color, far superior. Such, it would seem, are those referred to by him, which, "in the spring, growing in a pot, are really splendid." There are many flowers truly beautiful in Europe, which, when brought here, are not worth growing; but how can the problem be solved as to whether such will succeed here or not without a trial?

It may not be out of place to subjoin "Glenny's Properties of the Verbena;" and although not perfect in every respect perhaps, are nevertheless worthy of the attention of those interested in the improvement of those flowers:

1. The flower should be round, with scarcely any indentation, and no notch or serrature.

2. The petals should be thick, and flat, and bright.

3. The plant should be compact; the joints short and strong, and distinctly of a shrubby habit, or a close ground-creeper, or a climber; those which partake of all are bad.

4. The trusses of bloom should be compact, and stand out from the foliage—the flowers touching each other, but not crowding.

5. The foliage should be short, broad, bright, and enough of it to hide the stalks.

Taking this as a standard by which to judge the varieties in cultivation, it will at once be seen that a whole host of them would be consigned to oblivion, and some possessed of one or more properties would be found deficient in others; while no one in existence would be found perfect in every respect. Where is the perfect Verbena, when measured by the ideal of perfection? It has not yet found its way into Connecticut, nor yet to Baltimore. After all, there is a higher point to be reached before perfection is gained; and it would be well for all concerned, were they to strive to be first at the goal, rather than spending time pelting fellow-laborers in distant fields with bad names; or questioning the motives of those who have already done much, and are likely to do more, for the improvement of the Verbena. And we would advise all the growers of this flower to hold fast to those which are good wheresoever raised, and discard every thing inferior, regardless of names and high recommendations.

[We do not understand Mr. Pentland as objecting to our English cousins adopting lordly names for their plants, but to ourselves being too much led by them. Mr. Veitch gives a very good reason why they should adopt such names in England, and we can readily perceive the propriety of it. We do the same thing here; that is, we seek to name our plants after distinguished individuals. But the point made by Mr. Pentland is, that we patronize foreign plants to the neglect of our own; and there is a circumstance mentioned by Mr. Veitch, which, no doubt, has much to do with this, and that is the fact that plants in England have to pass the ordeal of a censorship, which indorses their character, for that climate at least, and gives us a degree of confidence in them even here. Such a censorship is much needed here, composed of persons entirely competent and honest, and altogether above being bribed. We mean to give more attention to this aspect of the case. But there is a fact bearing still more strongly on the subject, not alluded to by either party, but which they may yet bring out. Another correspondent has expressed a desire to speak on the subject, and we prefer to let him do so without furnishing him with hints. There is something in the subject worthy of discussion.—Ed.]

DESIGNS IN RURAL ARCHITECTURE, No. X.—RURAL OUT-BUILDINGS.

BY GEO. E. HARNEY, LYNN, MASS.

We have a few words more to offer at this time with regard to these structures. Although in those designs which we have thus far presented we have confined ourselves entirely to structures for ornament, yet by no means have we left out of mind those other adjuncts to a country place, which serve a useful as well as an ornamental purpose.

There are the wood-shed, the ice-house, the dairy, the hen-coop, the accommodations for his majesty Sir *Sus*, and the house for the horse and cow, etc., etc. All of these should have an expression of purpose, and an air of taste, helping to give importance to the place, rather than, as is too frequently the case, being

A SUMMER HOUSE.

ugly excrescences, spoiling all the good effect of a well-designed dwelling and neatly laid-out grounds.

In style these out-buildings should correspond with the dwelling-house to which they belong, though cheaper in construction and simpler in detail. If the style of the house be Gothic, or any of its modifications, then the out-buildings should be Gothic in a milder form, as the simple rustic battened style. And if the dwelling be Italian, they should partake of that style, with the flatter roof, the more prominent cornice, and the general prevalence of horizontal lines which characterize it.

More than any thing else we need a *wood-shed*. This, which might also contain

the privy, should be but a short distance from the house, an unpretending structure, built of wood and battened, with low eaves, and a broad hood over the door, and vines covering its sides, and flowers growing around it. Or it might be connected with the house by a covered trellis, on which should be trained flowering and fruit-bearing vines, forming thus a pleasant passage, sheltered by green leaves and fragrant with sweet-smelling flowers, or rich with clusters of purple and white grapes.

Then, too, it is very convenient, in fact, is necessary to have ice in the summer-time, to preserve our edibles and our drinkables, and to afford a cooling draught, which is exceedingly grateful on a hot day; and, as there is no *ice-man* here to leave a cake every morning at our door-step, we will have a supply of our own. So, away in some sheltered corner of our lot, not too far from the house, by-the-way, where there is a thick clump of trees, whose dense foliage the sun can not penetrate with his burning rays, we will choose a spot for the location of our *ice-house*.

This should be about twelve feet square, and eight or nine high to the plates, built with double walls, filled in with damp tan, or charcoal, or saw-dust; with double doors fitting tightly, the inner one in two parts, with separate hinges and hasps; a broadly-spreading roof, with a ventilator at the apex; and a thorough provision for the drainage of water underneath.

Then, when winter has come, we will make a half dozen trips with the horse and sled to a neighboring pond, and, provided the ice be at least seven inches thick and clear as crystal, we will fill our house with the coming summer's supply; placing first upon the floor a heavy layer of saw-dust, or tan, or straw, then the ice, and finally another layer of straw over the whole, to keep out the air as effectually as possible, then shut all the doors and "let it sweat;" and when summer has come, and the water grows tepid, and the butter commences to soften on the table, and the meat to spoil, we have an ally here that will prevent any further mischief of the kind, bidding defiance to the hottest sun.

Then comes the *dairy*. This, too, like the ice-house, should be in some cool, sheltered spot, handy to the house; and more ornament will be allowable here than in the other out-buildings. We have seen one built of stone, octagonal in form, with a steep roof rising like a tower in the air, and surmounted by an ornamental vane; the interior floored with encaustic tiles; the shelves of marble; the ceiling ornamented with fresco; a fountain spouting water from the mouth of a swan into a marble basin, and other like *fancy work*. But unless a person has a very expensive house, with gardens, and parks, and out-buildings to correspond, this is not the dairy for him. A small, well-ventilated building, with broad eaves; a cellar under it, thoroughly drained; shelves around the sides for setting the pans; a broad table in the centre, with a cupboard underneath; conveniences for working, and churning, and packing, constitute all the requirements of a family dairy; and these are within the reach of almost any one—the *fancy work* being better somewhere else.

As good a plan for a dairy as we have seen was published some time since in the *Country Gentleman*. It consisted of a room ten feet by sixteen, situated directly over a cold cellar, with provision for ventilation above and below, and surrounded on three of its sides (though we would surround all four sides) with a ventilated space of a foot or two in width, by which means an equal temperature is preserved at all times.

This room was entered by two doors, the one solid and the other a frame covered with lattice or wire-gauze to admit cool air when necessary. The

shelves were narrow strips of inch board, set on edge in notches cut in the upright boards which support them, with a space left out for a window. The peculiarity which we wish to recommend, however, consists in having the separate air-chamber surrounding the room, which we consider the best means we have ever seen adopted for preserving an equal temperature throughout, all the time. Thus much for the dairy.

Then the fowls and pigs should receive their full share of attention, for they are very important and very useful members of the country family; in fact, it would be akin to impossible for us to get along without the fresh new-laid eggs every day for the table, and in due season the tender bodies of the one, and the delicate spare-ribs, the rich brown hams, and the crisp white rashers of the other, to say nothing of their highly artistic and truly domestic performances in the musical line, which greet our ears at stated periods—the homely, self-satisfied grunt of the latter, and the cheerful, promising cut-cut-cut-a-cut of the former. And in order that they may be good producers, and finally yield themselves up as sacrifices in good condition for the table, care should be taken that they have ample and comfortable accommodations.

A building twelve feet by eighteen, facing the south, divided into two separate apartments, having each a separate yard attached, the one looking toward the southeast and the other toward the southwest, will give sufficient room for two or three pigs and two or three dozen fowls; and these will be as many as any ordinary family will need, unless the owner raises eggs and pork for market, in which case it will be necessary to have a separate establishment for each, with separate rooms and yards on a more liberal scale. But whether the stock be large or whether it be small, and whatever be the accommodations, a perfect *cleanliness* should always be preserved, as indispensable to the successful raising of either fowls or swine. The former, we all know, are neat in their habits, and the latter, although they are not over fastidious in their taste, are by no means, naturally, the filthy animals they have the reputation of being; and it is only by neglect that they are found wallowing in the mire and covering themselves and their pen with dirt. It is now conceded, on all hands, that with a proper care they may be kept as clean and neat as cows or horses, or any other animals. Supposing neither of the above was ever curried or brushed, and their stable was never swept out; we ask, how much better than the hogs would they appear in a month's time? And, on the other hand, supposing the latter were curried every day, and their pen thoroughly cleaned every morning and evening, would they not in a little while compare favorably with the others?

We hope before long to see the time when the name of hog will no more be associated with filth than it has been heretofore with tidiness; and when this time does come, we shall see the *millennium* of pork raising.

"But," say you, "what has all this talk to do with the summer-house you have placed at the head of your article?" Sure enough, what has it? We will therefore close this rambling "mere mention" of topics, to which many pages might be profitably devoted, hoping at some future time to resume the subject, and enter more fully into the detail of the matter, with plans and designs to illustrate.

We present with this a design for a summer-house, of the simple Gothic style. It is to be constructed of rough joists and rough boards, with sides of lattice, and roof covered with shingles, and measures ten by twelve feet, with eight feet posts. It is simple and easy of construction and moderate in cost.

THE YELLOWS IN PEACH-TREES.

BY WILLIAM REID, ELIZABETH, N. J.

HAVING read in the *Country Gentleman*, page 46, Jan. 17th, a report of the discussions of the Fruit-Growers' Society of Western New York, held at Rochester, January 9th, I find, in article 3, "The Yellows in Peach-trees."

My belief is, that no tree contains any contagious disease within itself, or can contaminate or give a disease to another tree. I also believe that all the diseases that trees have are brought on by local causes. Take away those causes, and trees will be healthy.

Let us look over the various remarks made by our western friends, when in session at Rochester.

First: H. N. Langworthy says a diseased tree of his, having what he supposed to be yellows, produced fruit a month earlier than a healthy one, and put out a number of small shoots with yellow, sickly leaves. Now, I would ask any person that has had any experience in peach-growing, if this is not always the case when a tree dies. It invariably puts out these small, imperfect shoots, with yellow, sickly foliage. This is what people call yellows. I would like to know what other disease trees die of, or if there is any other way. If so, I would like to know what the appearances are. All peach-trees die; some sooner, some later, according to the varieties. Eight to ten years are now as long as we can get peach-trees to live here. They have never lived much longer than this for the last forty years; and occasionally, when we have very severe winters, they do not live as long. But they invariably die off in the same way, with small, yellow, sickly foliage. They did so forty years ago; how much before that period I would not undertake to say. Now, if this is true, what our modern horticulturists call yellows has always existed. I can only vouch for it being so for the last forty years; but I have no reason to doubt it has been so ever since peach-trees have been cultivated.

Again: we often hear the remark made that peach-trees don't live as long now as they did formerly. This may be the case occasionally, but not always. Fresh, virgin soil, favorable winters for a number of years, and the fact that many of the orchards then were natural trees, will account in a great measure for the difference that may sometimes have taken place. But sooner or later these trees all died, and died exactly as they do now, by sending out these small shoots with yellow, sickly leaves; so that nothing unusual, after all, can be made out from H. N. L.'s remarks, except his having budded a peach-tree from a diseased one, and it killed the tree. This may be so in the West; but I believe it has never taken place here. Our trees do not seem to be quite so sensitive.

Dr. Sylvester says that the disease was so bad in New Jersey that they could only get two or three crops; which, after all, is not so bad as it might be. We think that peach-orchards pay well when we get three crops. How many does the doctor get, or expect to get, from his orchard? C. L. Hoag, again, says a gentleman of his acquaintance lost a whole orchard by introducing a diseased tree from the East. He does not say from what part of the East it came; probably, with more modesty than some of his neighbors, he refrained from saying where, but no doubt he meant the Jerseys. People in the Jerseys can not be too careful in introducing peach-trees of foreign growth, lest they should prove as disastrous as the one Mr. Hoag's friend received from the East. After Mr. Hoag we have Mr. Downing's testimony. He says a man in his neighborhood had a tree which

was affected, and from this tree the disease has spread all over the neighborhood. Mr. Downing, in a remark to Mr. Hooker, says, again, that the disease does not exist in the South, and that trees sent from the North get healthy again. If this is so, this supposed disease is not as fatal as it has been represented to be by some people; losing its contagious properties when removed to a warmer climate. Perhaps Mr. Downing is not aware that peach-trees die off in the South in the very same way they do in the North—by ripening their fruit prematurely, and sending out the same weak, sickly shoots that they do in the North. Now I can vouch for this being true, (not hearsay,) having travelled through nearly all the Southern States within the last few years. I have also lived in several of them for short periods, a number of years ago, giving me ample opportunities of observing the Peach-tree. I have also travelled through and had opportunities of observing the growth of the Peach-trees in nearly all of the Northern States. As I have observed, I had frequently heard of old orchards of Peach-trees living to be as large as Apple-trees. Now such things might have existed in the early settlement of the country, when the soil was fresh and newly broken up for the first time; for I believe this to have been the cause. Many of the orchards, also, at that time were natural trees, which are always more vigorous and hardy than those varieties so long under cultivation by budding. From these causes, in a great measure, the old orchards spoken of may be accounted for. But very few of these old trees are now to be seen, even around Rochester, which are any larger or better looking than many of our own orchards in the Jerseys. I have been told (but this I can not vouch for) that these same orchards are nearly all planted, with few exceptions, with trees which came from the Jerseys. Further west and south, I am not able to say where the trees came from; but, from appearance, they do not seem to be very old—from eight to ten years.

Having digressed a little from the remarks that I commenced with, I will return to what Mr. Sharp says. He undertakes to inform the people, and warns them against some itinerant peddler, (he does not say whether he comes from the Jerseys or is one of his own peddlers,) having brought into the neighborhood of Rochester a large quantity of trees from the Jerseys, and is now selling them to plant orchards with. I have no knowledge of any nurseryman, in this part of the Jerseys, engaged in such a business; but I have no reason to doubt its truth, for we have many such travelling here, selling trees, with pictures, credentials, and vouchers enough for one of our foreign ministers, going to represent us at the Court of St. James, who will agree to furnish every thing in the way of trees, from a Lawton Blackberry to a fine Beurré Pear; and many of these same men tell us they come from your neighborhood. Now I do not say that it would be proper to use harsh means, or to commit any breach of the law, to get rid of these men, who have the assurance to go in among you with such trees; yet I certainly would make an effort to get rid of all such, even if I had, as a last resort, to make use of gentle means, as a warning to others who might be inclined to do the same. We will now leave Mr. Sharp to make use of our advice to the extent he may think proper.

Let us now turn to H. E. Hooker's remarks. He says he has seen orchards planted with trees from the Jerseys which did very well. Again, he says he has seen orchards planted from the same source that soon died, but did not infect other orchards. He also says, in another place, that diseased trees sent South became healthy. Leaving Mr. Hooker, we now come to the remarks made by P. Barry, of the firm of Ellwanger & Barry. Let us see what friend Barry has to say about this vexed question. He says—what is perhaps nearer the truth than

any thing yet said on the subject—that he does not think the disease contagious, and believes the cure for yellows to be a good fertile soil, and the cause of it a very poor soil; a very sensible remark, and coincides with our own views. Now if these remarks of Mr. Barry are true, (and I see no good reason to dispute them,) the disease called yellows by some people is no disease at all, but what is brought on by a poor soil; and it can be brought on at pleasure by using this means, viz., a poor, hungry soil. He then says, further, that he has had trees from a region badly affected—he does not say from what region, but from other remarks he evidently means some part of the Jerseys; for nearly all the good trees, as well as the bad, come from there—which became healthy when planted on good ground. What does he call badly affected? He says, previously, that the cause was poor soil, and a good soil the cure. From this we are led to infer that the trees he had received were from some poor soil, which goes to confirm what he already says, that the disease is no disease at all, and only such as any person with his eyes open, and with any knowledge of trees, would at once see and reject as poor trees, and avoid buying them. Mr. Barry, however, before leaving the subject, makes some further remarks, which are not so easily explained. I refer to the remark previously made, that he had a lot of trees badly affected, which, when planted on good ground, became healthy. Notice this remark. These trees, no doubt, were year-old trees; at least we may suppose that Mr. Barry would not be likely to plant them older. Then he follows on again, in another remark, and thinks the Peach-tree does not have the "yellows" in New Jersey until three or four years old. The remarks last made are rather contradictory, as he says he planted an orchard with tress which were badly affected, and which we have every reason to suppose were one year old; so that either the first or last remark must be wrong; for he distinctly says that trees do not get sickly until three or four years old. Mr. Barry then leaves us with strong advice not to purchase any trees from the Jerseys; or, in other words, would advise none to plant Peach-trees that had the appearance of being grown in poor soil. The next and last speaker is F. W. Lay. What does he say? He says this: "Had known many orchards planted with Jersey trees; did not know of a single tree diseased in the whole orchard." Rather contradictory from previous remarks! Not having the pleasure of being acquainted with Mr. Lay, he may be a nurseryman, for aught I know to the contrary; but we have no reason to believe but that he speaks the truth.

This was the termination of the several discussions held by our Rochester friends on the disease called yellows.

Now what does it all amount to, when we come to go over all the testimony and analyze it? It seems to conflict in some things; yet, from all the evidence before us, I see nothing that makes the disease new, or any thing like contagious, except what a poor soil will effect, which every person who is familiar with the growth of the Peach can readily understand; and that all those so-called diseases proceed from bad soil and poor cultivation. I can not help believing, however, that many of the remarks which I allude to, and which were made by different individuals against trees raised in this state, were personal, and altogether uncalled for. Nor can I help thinking the whole of the discussion, or nearly so, was for the sole purpose of putting down the sale of trees grown here, and in favor of those grown in the neighborhood of Rochester. As far as I am personally concerned, I care not what others say about trees, believing that people here are perfectly competent to judge of the quality of trees without the assistance of any of our Western friends. I would also say, and I say it without hesitation, that more good trees are now grown and sent every year from the state of New Jersey than

all the other states in the Union. I do not pretend to say, however, that this is by any very superior knowledge or art, for almost every one can grow Peach-trees; but from the favorable locality of the state, and the mild winters that generally prevail, and being altogether free from those great changes in the temperature which the West is subject to, and which will always be a drawback to the cultivation of the Peach successfully, as well as many other kinds of trees.

I would, while speaking of the quality of trees grown in different sections of the country, the defects of which our friends in the West have been so diligent in pointing out, call the attention of parties who are about planting Apple-orchards, which are likely to be of far greater importance to the country at large than the Peach-tree, which people are perfectly able to judge of by appearance, to some defects not so easily detected in the apple. I allude to the millions of Apple-trees that the country is now being flooded with, and distributed in every corner of the land by persons calling themselves tree agents or peddlers, who come from all parts of Western New York. I allude to those trees that are known by the name of root-grafted trees. They are, to be sure, what they term them, root-grafted; but the root, if root it may be called, is a mighty small root, or piece of a root, being only a piece about two inches in length. A more proper name would be to call them cuttings, for they are nothing more nor less than Apple-trees grown from cuttings, the small piece of root only keeping the graft alive until the cutting begins to grow, which makes new roots of itself. The consequence will be, after a few years, or when they begin to bear, that a great proportion of them will blow down with the wind. Being only cuttings, they are deficient in the strong roots which Apple-trees have that are budded or grafted on the seedling stock above ground, and which are so necessary to make strong, lasting, and permanent trees. And I would advise every person who is about planting out permanent orchards, to have nothing to do with any Apple-tree that is not grafted from six inches to a foot above the ground. They are not only likely to be much hardier, but have roots to sustain them when they come into bearing and are of a large size. This is one reason why so many trees, now to be seen in the West, that have been planted with these root-cuttings, are dying out in winter. Not only have they this objection, but they are also nearly all more or less lurched over from the effect of the winds; and whoever plants them will be disappointed, sooner or later. Most of the tree peddlers that travel through the country, on account of cheapness, and from the short, bushy roots being more portable than Apple-trees that are grafted above the ground, carry this kind of tree with them. It is certainly not necessary now, if it ever was, to buy trees of traveling agents who have no fixed place of residence, or responsibility, and who generally are ignorant men, scarcely knowing the name of one tree from another, except what the circulars and other credentials they carry give them, which they generally have in abundance. I would again advise every person to go to a responsible nurseryman—and there are plenty of such—who will send them trees correct to name, who have their character and reputation at stake, and who are generally more competent to judge as to what varieties are best adapted to the locality the purchaser lives in. Not only this, but they can generally purchase all kinds of trees cheaper and better than from such agents. I have often been astonished to meet with shrewd business-men, whom you would think would in a moment be able to decide on any thing, and generally come to correct conclusions, who, when they go into the country to plant trees, seem to know nothing at all about this business; and well these agents know that these are the men to begin with, by first showing them their bundle of pictures containing exaggerated paintings of all kinds of fruits and flowers, which they very likely know very little about, having, perhaps,

never seen them, and know them only by the paintings they carry around with them. I am satisfied that more loss and disappointment have been caused to purchasers by peddlers sending small, worthless trees through the country, than would have sufficed to plant the whole Western States. In place of this, they now have to begin and replant all the grounds planted from 1850 to 1855. I refer now to small, worthless Pear-trees as well as Apple-trees, many of them only a year old, and not more than two or three feet high, which was the usual size sent out at that time. The consequence is, they have all, or nearly all, been frozen out by the severe winters, and scarcely a vestige of them is now to be seen. But people have learned wisdom, if it has cost pretty dear. They are now raising their own trees and planting them of a suitable size, and will in the end, no doubt, although it may have cost something, have the pleasure of raising their own fruits as well as their own trees.

[What can our Western friends have been doing to rouse the quiet and taciturn William Reid? We have never known him to fire such a big gun before. We would add a few words on the "yellows," but the article is already very long, and we let them pass for the present.—Ed.]

A SELECT LIST OF GLADIOLI.

BY THE EDITOR.

Among garden bulbs, the Gladiolus is perhaps one of the most popular, or at least is in a fair way of becoming so. The introduction of Gandavensis, a few years since, gave a new impetus to their cultivation, and in the hands of the French they have been made to take their place among the gayest flowers of the garden. Not their least recommendation is the easy manner in which they may be grown, any common garden soil suiting them well; though, in common with all other plants, they make a grateful return for any labor bestowed upon them. A very rich soil is not the best for them, as it is apt to make their colors run. Old manure from a hot-bed, with some vegetable mould, thoroughly incorporated with the soil, is about as good as any thing that can be used; the manure, however, should be used sparingly. They may be planted singly, or two or three together, and provided with a stake. The crown or top of the bulb should be about two inches beneath the surface. In the fall the bulbs are to be taken up, and stored in a green-house or cellar, free from frost. But we only design to give a list. We examined last season upwards of a hundred varieties at Mr. Bridgeman's, at Astoria; and, in order to help our readers to make a good selection of those already known, we append a list of twenty-four which we marked *best*. Some of the new kinds, of which we have just received a fine collection from Messrs. Thorburn, may prove to be even better than those named; there are others also nearly or quite as good as those in our list, and these should not be forgotten. The improvement is still going on, and the best we now have may soon be surpassed. The following, however, can not fail to give satisfaction.

Madame Haquin, blush, heavily flaked with lilac purple; lower petals shaded yellow, and marked with rosy purple.

Madame Pauline, blush white, sometimes heavily flaked with rose; heavy crimson purple, feathered blotch on all but lower petals.

Madame Paillet, rosy pink, slightly flaked with scarlet; dull purple blotch on lower petals, and frosted.

Madame de Vatry, pure white; lower petals shaded yellow, and feathered with crimson.

Danaë, snowy white, delicately flaked with deep rose; lower petals tinged with reddish buff.

Clemence, blush pink, heavily flaked with cherry scarlet; lower petals shaded, and marked with crimson maroon.

Compt de Morny, deep rose, flaked with maroon; lower petals white, shaded with crimson.

Don Juan, deep rose and dark scarlet, mottled and flaked; lower petals shaded golden yellow, with single stripe of maroon through the centre.

Duc de Malakoff, rose, flaked with scarlet maroon; lower petals shaded white and yellow, and marked with crimson maroon.

Eugene Verdier, white, flaked with rosy violet; lower petals blotched with rose and marked with carmine.

Imperatrice, blush white, delicately flaked with rose; lower petals feathered with crimson; good form.

Vulcain, deep fiery scarlet, richly shaded; the darkest of all.

Victor Verdier, rich fiery scarlet, with heavy shade of black maroon on lower petals; good form.

Madame Truffaut, pink, flaked with cherry; heavy dark maroon blotch on lower petals; large.

Adonis, salmon pink, shaded with crimson lake; lower petals tinged buff, and distinctly feathered with crimson.

Berthe Rabourdin, pure white ground, slightly flaked with rose; heavy blotch of crimson on lower petals.

Mars, vivid scarlet; lower petals shaded pale yellow, and heavily feathered with ruby maroon.

Mathilde de Landevoisin, blush white; lower petals distinctly feathered with purple maroon; fine form.

Napoleon III., brilliant scarlet; lower petals pale yellow, marked with maroon.

Ophir, buff yellow, flaked with rosy crimson; lower petals shaded bright yellow, and feathered with chocolate brown.

Oracle, rich rose, tinged with violet, and delicately flaked with scarlet; lower petals shaded yellow, and marked with purple.

Othello, very brilliant scarlet vermilion; lower throat clear yellow, feathered with deep crimson.

Penelope, blush pink, sometimes flaked with cherry scarlet; lower petals shaded yellow, and marked with maroon; very large.

Premices de Mont Rouge, rich rose and fiery scarlet, handsomely shaded; fine form.

NATURAL GRAPE ARBORS.

BY W., WASHINGTON HEIGHTS, N. Y.

Mr. Editor:—The annual grape-pruning season has brought to my mind a subject upon which I have been cogitating for some five or six years past; but before proceeding further, I may as well—for fear of subjecting myself to the charge of

plagiarism, or, in plainer English, "stealing other folk's thunder"—remark that some one else, some time ago, either in this magazine or the *Gardener's Monthly*, alluded to the same subject. Without much trouble I could, I presume, find out what was said and where it *was* said, but I do not desire to do so. I would rather simply record my own observations and impressions.

In pruning grape-vines on arbors or trellises, I have INVARIABLY observed that whenever the young growing shoots come in contact with any tree within their reach, they will take hold of the branches and grow away, till they attain double the length of any of the others that are growing exposed on the arbor; and not only longer, but make stouter and firmer wood.

Now let these stray shoots remain undisturbed and unpruned for a year, or two years, and the result will be not only a better quality of fruit, but at least DOUBLE THE QUANTITY of it, compared with those on the arbor.

Now the question naturally arises, Why is this? It is very certain that this difference does not result from manuring the roots or pruning the branches. In fact, as far as the roots are concerned, they are laboring under great disadvantages: being, of course, in close proximity to the tree on which they climb, they are, consequently, robbed of at least a moiety of their sustenance.

The only satisfactory conclusion I can arrive at about the matter is this, that the shoots of those vines in the tree find there a grateful, genial, humid atmosphere, in which they love to luxuriate—HUMID compared with the ARID atmosphere that surrounds their neighbors on the exposed trellis; they have also a more uniform temperature, as well as the SHADE in which they so much delight, and which I think is so very ESSENTIAL to the well-being of most, if not ALL, the native vines.

Three years ago, in pruning the vines on a small arbor, about thirty feet long, having four vines on each side, I observed that two shoots of the preceding summer's growth had run into an apple-tree which grew very near one end of the arbor. I had my hand on one of these truant shoots to pull it out of the tree (as it was very fine wood) and place it on the arbor with the others, but I suddenly changed my mind, and thought I would leave it where it was, to pursue its erratic course, in company with the other delinquent shoot.

The bunches were not counted nor the fruit weighed, to my knowledge; but my belief is, that from those two stray shoots, in that old apple-tree, there was nearly double the quantity of fruit that there was on all the other vines on the arbor put together, notwithstanding the manuring they received, and the pruning, as I thought, "according to scientific principles."

Now the above is not an isolated or exceptional case, BUT THE RULE, wherever and whenever they come within reach of a tree. A knowledge of these facts convinces me that pleasing and profitable results may be obtained from this well-known predilection of the vine for shade, by planting them adjacent to trees, where circumstances will admit, and there leaving them, unmolested, to indulge their freaks and whims.

For some time past, (excepting last season,) the Isabella and Catawba grape crop has been almost a failure in many localities, rotting and shanking off before they were ripe. I feel confident that by planting a few vines here and there, where they will have a chance to run into the trees and take care of themselves, in this way, without any further trouble, (except picking,) scores of bunches of good, sound fruit will be obtained, when those on arbors, stakes, and trellises are a comparative failure.

For the sake of illustration, I will give a sketch of one way in which I think I would plant a dozen vines, for a start, if I had the opportunity to do so. I would

Madame Paillet, rosy pink, slightly flaked with scarlet; dull purple blotch on lower petals, and frosted.

Madame de Vatry, pure white; lower petals shaded yellow, and feathered with crimson.

Danaë, snowy white, delicately flaked with deep rose; lower petals tinged with reddish buff.

Clemence, blush pink, heavily flaked with cherry scarlet; lower petals shaded, and marked with crimson maroon.

Compt de Morny, deep rose, flaked with maroon; lower petals white, shaded with crimson.

Don Juan, deep rose and dark scarlet, mottled and flaked; lower petals shaded golden yellow, with single stripe of maroon through the centre.

Duc de Malakoff, rose, flaked with scarlet maroon; lower petals shaded white and yellow, and marked with crimson maroon.

Eugene Verdier, white, flaked with rosy violet; lower petals blotched with rose and marked with carmine.

Imperatrice, blush white, delicately flaked with rose; lower petals feathered with crimson; good form.

Vulcain, deep fiery scarlet, richly shaded; the darkest of all.

Victor Verdier, rich fiery scarlet, with heavy shade of black maroon on lower petals; good form.

Madame Truffaut, pink, flaked with cherry; heavy dark maroon blotch on lower petals; large.

Adonis, salmon pink, shaded with crimson lake; lower petals tinged buff, and distinctly feathered with crimson.

Berthe Rabourdin, pure white ground, slightly flaked with rose; heavy blotch of crimson on lower petals.

Mars, vivid scarlet; lower petals shaded pale yellow, and heavily feathered with ruby maroon.

Mathilde de Landevoisin, blush white; lower petals distinctly feathered with purple maroon; fine form.

Napoleon III., brilliant scarlet; lower petals pale yellow, marked with maroon.

Ophir, buff yellow, flaked with rosy crimson; lower petals shaded bright yellow, and feathered with chocolate brown.

Oracle, rich rose, tinged with violet, and delicately flaked with scarlet; lower petals shaded yellow, and marked with purple.

Othello, very brilliant scarlet vermilion; lower throat clear yellow, feathered with deep crimson.

Penelope, blush pink, sometimes flaked with cherry scarlet; lower petals shaded yellow, and marked with maroon; very large.

Premices de Mont Rouge, rich rose and fiery scarlet, handsomely shaded; fine form.

NATURAL GRAPE ARBORS.

BY W., WASHINGTON HEIGHTS, N. Y.

Mr. Editor:—The annual grape-pruning season has brought to my mind a subject upon which I have been cogitating for some five or six years past; but before proceeding further, I may as well—for fear of subjecting myself to the charge of

plagiarism, or, in plainer English, "stealing other folk's thunder"—remark that some one else, some time ago, either in this magazine or the *Gardener's Monthly*, alluded to the same subject. Without much trouble I could, I presume, find out what was said and where it *was* said, but I do not desire to do so. I would rather simply record my own observations and impressions.

In pruning grape-vines on arbors or trellises, I have INVARIABLY observed that whenever the young growing shoots come in contact with any tree within their reach, they will take hold of the branches and grow away, till they attain double the length of any of the others that are growing exposed on the arbor; and not only longer, but make stouter and firmer wood.

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For the sake of illustration, I will give a sketch of one way in which I think I would plant a dozen vines, for a start, if I had the opportunity to do so. I would

look around the ground for a good-sized tree. I would prefer an apple-tree, if it was in the right place, as they do not grow so high, and would give a larger, broader surface for the purpose than most other trees. I would measure out from the trunk of the tree twelve or thirteen feet, more or less, and draw a circle around the tree at that distance from it. On the line described, six feet apart, I would put in stout cedar or chestnut undressed posts, eight feet high, (above ground,) and fill in with panel-work of the same rough material, (rustic summer-house fashion,) and then plant a vine to each post. On the top of each post, if necessary, a pole may be nailed, slanting into the tree, and secured to some of the stouter limbs, for a rafter, till the vines had firm hold of the branches.

Inside this now pomological summer-house (twenty-four feet in diameter) permanent seats may be fixed; and also a table around the tree, or a short winding stairway may be made for convenience in picking the fruit. I must not forget to mention that it will be necessary to leave a space open between two of the posts, or two or four openings may be left, and a walk, or walks, leading to them. And now, Mr. Editor, don't you, with your mental visual organs, perceive what a glorious summer-house I have (in imagination) erected for the children? Take my word for it, sir, to this temple will they daily repair, and worship at the shrine of Pomona. Well, what if they do occasionally gorge themselves with apples and grapes? Bless you, sir, ripe grapes won't hurt children; no, nor the "big uns" either. How do I know? I will tell you how I know. About four years ago I suddenly and agreeably came in come-at-able contact with four or five as fine bunches of Muscats and Hamburghs as were ever unpacked and tasted in any HORTICULTURIST's (horticultural, I mean)—editor's sanctum sanctorum. How many pounds I ate I can not precisely tell, but let it suffice to say that I WAS FULL, not in a figurative sense, but in reality. I felt—I think I felt—something as I suppose a boa-constrictor must feel after having swallowed an antelope, horns and all. Well, I made up my mind that if I did not die that night, I should not require any thing to eat for the next two days at least; but, to my utter amazement, I never felt better in my life than I did that very next morning, and never in better condition to perform, if required, a *gastronomical* feat. Now, sir, this is how I know that RIPE GRAPES WON'T HURT CHILDREN. Therefore, let them go to this play-house that I have erected for them as often as they like, and play, and rollick, and romp, climb the tree, and eat apples and grapes to their hearts' content, WHEN THEY ARE RIPE; and, likely enough, when the family physician presents his bill, papa will find that he has saved enough on that to pay for the labor and material used and expended in the erection of my "Natural Grape Arbor."

[A right good finish, W. You have shown so much taste and such great capacity for Muscats and Hamburghs, and, withal, have been so considerate for the children, that we have no disposition to criticise any thing you have said. By all means let the little ones eat *ripe* fruit freely and abundantly; nothing could be better for them. But let us look a moment at the point you started with. It is an undeniable fact that vines will run on trees precisely as you describe; but we regard your example as an unhappy one from which to draw principles of *practice*. Vines, as generally grown on arbors, are submitted to a killing process, which few of them survive for many years, and which produces unfruitfulness and constitutional weakness at a period when they ought to be showing all the vigor of youth. Under these circumstances it reaches forth one of its arms to a neighboring tree, and, under the operation of the "first law of nature," runs for its life; and not only so, but carries with it a large portion of the sap which would otherwise go

to sustain the whole vine; hence the other portions become starved and enfeebled, and the fruit small and poor. We do not think it safe to generalize facts under such circumstances. Take a well-grown vine on a trellis, (not an arbor,) and one growing at random on a tree, and we have no doubt of the result. We think, however, that as good grapes may be grown on a tree as are often found on arbors, such as we find them; and they are poor enough, lacking in every good quality except sweetness, and not always possessing that. Do you mean to say, W., that *our* vines love shade, or that grapes will ripen as well in the shade as in the sun? Of course you do not; you only wanted us to keep a little shady while you made that pretty "Pomological Summer-House." We see now what you were after. It was a pretty conceit, and handsomely done. We like the idea, and hope many such houses will be made for the children to play in. They will make a pretty feature on the lawn, afford a grateful shade, and some tolerable grapes, but not many apples, for the vine will certainly kill the tree in time, for which you have not provided; but the arbor will remain, and that is all you probably want. We "go in" for Pomological Summer-Houses, but without the expectation of getting the best fruit from them.—Ed.]

THE BERGEN PEAR.

(*See Frontispiece.*)

BY THE EDITOR.

Our Frontispiece for the present month is the *Bergen* Pear, a native of Long Island, a much-abused place, but which, nevertheless, has given to the world its best apple, and a fair proportion of the best fruits in cultivation. The Bergen Pear was found growing in a hedge on a farm at Bay Ridge, owned at the time by Simon Bergen, from whom it took its name. The tree is still standing, and is about fifty years of age. It is naturally of a good form, and comes early into bearing; it may be called uniformly and fairly productive. The young wood is reddish, sprinkled with white dots. Though not of the best quality, it is a valuable market fruit, usually selling at the same price as the Bartlett. It is a recommendation for any pear for market purposes that it resembles the Bartlett; the people know that, and conclude, not very logically of course, that any pear that looks like it must be like it. The Bergen, when carefully ripened, is nearly of "best" quality. It is a peculiarity of this pear, that in many specimens the core and seeds are absent. Our specimen is of the average size, and was taken from a basket prepared for market; some of the specimens were nearly double this size. The fruit on the outside of the tree becomes highly colored; the cheek in this specimen is not clearly shown, on account of the lithographic ink "striking through," as the printers say, making it look dark and dull. The season of the Bergen is from October to November. It was first brought to notice by John G. Bergen, Esq. We have gone somewhat into detail, because we think that the history of a fruit, when it is clearly known, ought to be put upon record.

The following is our description: *Size*, large. *Form*, pyriform to pyramidal. *Color*, glossy lemon yellow, shaded with crimson and fawn, and sprinkled with crimson and red dots. *Flesh*, whitish yellow, a little coarse, slightly gritty, melting, juicy, and sweet, with an agreeable aromatic flavor. *Stalk*, stout, of medium length, curved, with a fleshy ring at the base. *Calyx*, small, open, with

stiff segments, in a small, very shallow basin. *Core*, very small, and, with the seeds, sometimes absent. *Quality*, "very good." *Season*, from October to November.

RURAL SOCIETIES, NO. 2, AND CONCLUSION.

BY R. ROBINSON SCOTT, PHILADELPHIA.

THE emergency having passed away that induced me to reënter the pages of the HORTICULTURIST as a contributor, having for several years denied myself the pleasure of being found there, I have no longer any apology for occupying a place among its correspondents. Your remarks appended to my notice of Rural Societies warn me from the purpose that I had contemplated, since you advise me that he who would unfold the causes of the low position of these societies in general must be a *judge*, and not a *lawyer*. Poor as a lawyer, I must make a still less efficient judge, and prudence admonishes me to allow Societies Nos. 5, 6, 7, 8, 9, 10, and all the others whose positions are yet undefined, to rest in peace. Of No. 5, your neighbor across the river, I should have wished to speak, as it commends itself to the lovers of horticulture, not only for the energy of its first officer, but for the results it has achieved.

I find, however, that, obnoxious as my style has proved to many of the former readers and writers in the HORTICULTURIST, I am equally obnoxious to parties nearer home, who have for years helped to pull the wires of several of these Societies; and I am even now charged with advocating all manner of "extreme ideas" and "impracticabilities"—with arriving at "hard-shell" conclusions, etc., etc. You will excuse me for the present if I decline being elevated to the *judicial* bench to try this case, preferring to leave it in your and your readers' hands. Permit me, however, to correct the amount of vested property held by Society No. 2. It is now $11,000, instead of $13,000, as last reported. Several other slight differences in amount of property may be noted, but the statements are very nearly correct. You will readily remember the period in the history of No. 3 when we were obliged to permit a great showman to humbug us into holding its annual exhibition at a Broadway museum. Has it never recovered that shock? will it never recover?

[We were rather pleased that somebody had undertaken the task of analyzing the causes which have operated in many instances to impair the usefulness of our Rural Societies. It was something that we had proposed to do, and felt relieved that somebody else had undertaken it. Our idea was, to analyze the principles upon which these Societies were conducted, to ascertain, if possible, wherein they had failed, and to suggest such modifications as might be called for; but to be very careful not to pull down unless we had something better to uprear. This would make it incumbent to look at all sides of the subject, much as a judge looks at a case from the bench, and not as a lawyer, who advocates only one side and without mercy to the other. This is what we meant by our *judicial* allusion. Are we not right? We do not fear investigation, and Mr. Scott we know is not afraid to make it; but perhaps the subject had better drop for the present. That museum show was undoubtedly an unfortunate affair, and damaged the Society, but it afterward saw some palmy days. The immediate causes of its failure you will know hereafter.—ED.]

THE SPAN-WORM.

BY DR. I. P. TRIMBLE, NEWARK, N. J.

You have but few singing-birds in cities, and for that reason caterpillars become very troublesome, and, unless checked by some Ichneumon, or parasite insect, go on increasing rapidly until famine does its work.

I have known some kinds of caterpillars in such numbers upon trees as to consume the foliage before they were fully grown, and in their attempts to reach other trees to be entirely at a loss as soon as they reached the ground—their instinct, so surprising on other occasions, now entirely at fault. Their helplessness on the pavement was pitiable, and they soon perished.

In this city (New York) you have a caterpillar of this class, the little span-worm, or Geometer. It is unnecessary to describe its personal appearance. This little worm, like many others, is something of a philosopher; it knows that if the wind should throw it from a high tree, and it had no means of breaking the force of the fall, it would be hurt. Now, to guard against any thing so unpleasant, it lays along its path, wherever it goes, a silken cable; push it overboard any where, and it will lower itself down deliberately and safely. It has also a kind of hand-over-hand way of climbing back again by the same cord. You may have noticed, also, that, when descending, they drop themselves a little way at a time, and then stop. These silken threads are spun from a fluid, and require some time to dry, otherwise they would not bear the strain.

Some of us in the rural districts of Jersey read the papers. Once last summer I noticed that the authorities were about to cut down the trees of this city to get clear of the worms. Now, nothing in your newspapers perplexes us so much to understand as the accounts of your local government. At one time your aldermen are called the "forty thieves;" then they appear to have nothing to do but to seek out the nativity of a fat policeman; and lately they seem to have been mixed up with the Japanese ambassadors in some very queer operations; but when your city governors *do* order your shade-trees cut down to get rid of the little caterpillars, we shall know exactly what manner of men aldermen are; then we, who pay some attention to classifying the orders of nature, will know precisely where to place them.

These little Geometers of your city, like most other caterpillars, feed upon leaves; they can not live without them. They are born in the trees; leaves are plenty, they are all around them every where, and they feel no kind of hesitation about taking all they want. And why should they? Their mothers selected these trees for them the year before; and this selection is the result of an instinct the most wonderful of the world of wonders in which we live. She selects from the many those few trees to deposit her eggs upon whose leaves will put forth the next spring just at the right time to afford food for her little ones when they come out of the eggs. In other words, she knows how much caloric is required to burst the buds of trees and the shells of her eggs, and she puts *always* the right eggs on the right trees.

If you will now search the bodies of certain kinds of trees in your city, you will find thousands of clusters of little eggs. Examine the elms, just under the large branches, where they go off from the main trunks, and in some places you may see the bark almost covered with them; if you let these eggs alone, you will find, in midsummer, when you want the shade, these trees will be almost as leafless as they are now, and the span-worms will be every where acting out Mohammed's coffin.

Man was created with dominion; but, if he does not choose to exert it, he should

not blame the little insects. Had I a favorite shade-tree coated over with these eggs, I would, within a month of this time, do something to prevent those eggs from becoming caterpillars. To tap each cluster with a hammer would do it—to take them off with a gouge or small adze, or to daub each cluster with paint, or varnish, or tar, would probably save the foliage of that beautiful tree. But nothing of this kind will be done here; and I shall have the opportunity next summer of seeing lots of these span-worms, and shall come on purpose.

The insectiverous birds in the country attend to the caterpillar business for us; but these birds will not stay with you. They do not like the noise, the smoke, and especially the boys of the cities.

These little span-worms, next summer, when they have eaten all the leaves they want, will choose others to make their houses of; for they belong to a large class called leaf-curlers; and this leaf-curling process, with some of them, is a very strange one. One much less than your span-worm, that lives on the plum-trees, and wraps a leaf around it, so as to resemble a well-formed cigar, I have watched throughout the process with surpassing interest. I have seen this little speck of a worm take a calm survey of a leaf, then fix her cord on one side, then cross over, and then again and again, and then at different angles; and when some twelve or fifteen of these cords were arranged, she would go backwards to some distance, and with a single cord act upon all these other cords, as if by a combination of leverage, operating with a power utterly above and beyond any thing so minute a creature could accomplish unaided by such a combination of mechanical forces; and this will be repeated again and again, gaining a little every time, till the whole is completed. Sometimes her strength or her cordage is unequal to the work; then she will cut away the obstructing part, and try again. In a few hours the leaf will be curled; the overlapping parts will be neatly sewed together; the inside will be lined with silk, composed, in a great measure, of the cordage she had used as an engineer. In a few days her limbs will have fallen off, and she will have assumed the pupa or chrysalis state, and appear dead; and in a few more days she will be a butterfly that flies at night—one that your lamp-light "leads to bewilder."

Once last summer, in crossing from Jersey to this city, a lady came on board the boat, with one of these little Geometers on her bonnet. The little thing seemed busy in measuring that bonnet; but it did not take long, and then it quietly perched itself upon the highest point. It was what is called a "love of a bonnet"—very beautiful, but very small; the lady herself was very beautiful also, but very large—a perfect Juno in her style, and most elaborately clothed in silks. She cast a hasty glance at her fellow-passengers; but the silk-worms had done much more for her than for any of the rest of us. Thousands upon thousands had spent their entire lives in her service. She evidently felt how magnificent she was, but probably did not ascribe it to the little caterpillars that had made her silks.

[The above we take from a lecture recently delivered in New York by Dr. Trimble, the subject being, "The Wonders of Creation as exemplified in Insect Life." He succeeded in interesting his audience for nearly two hours. There is something fascinating in the wonders of insect life which never fails to arrest the attention of both young and old; and the Doctor's characteristic humor took nothing from the interest of the occasion. Lectures on this and kindred subjects, in our rural towns, would be more useful and entertaining than many which are selected for the purpose.—Ed.]

EDITOR'S TABLE.

To Contributors and others.

Communications, Letters, Catalogues, Periodicals, &c., intended for the perusal of the Editor, and packages by Express, should be directed to the care of C. M. Saxton, 25 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

GLADIOLI.—In another place we have alluded to a lot of Gladioli received from the Messrs. Thorburn. We have since examined the parcel in detail, and find it to contain eighty-seven varieties, embracing not only those we have described, but many other fine kinds, besides a number of entirely new French varieties. They are all named and described in the Messrs. Thorburn & Co.'s catalogue. We are immensely delighted with our collection, and anticipate much enjoyment from them. The Gladiolus is so easily grown, and is so beautiful, that it should find a place in every garden.

ERRATA.—We have a few more to correct. In Dr. Thomson's article, p. 34, line 20 from top, read, "awards *of* fruit committees," &c. P. 35, line 12 from bottom, read "indite" instead of 'invite," which makes some difference. P. 36, line 18 from top, read "November, 1855," instead of "1853." Same page, line 20 from bottom, read "DANIEL WARFORD" instead of "Richard Warford." P. 81, first line of Dr. Grant's article, read "many" instead of "my." P. 83, line 8 from bottom, read, "will *not* form a lasting union," &c. We hope now to go on as usual, without the recurrence of such things.

THE NEW CALADIUMS.—In our notice last month of the new Caladiums, it is stated that they were *originated* by Chantin. *Introduced* was the word; the forms went to press without being revised by us. They were introduced into Europe by Chantin, just as they were introduced here by Mr. Buchanan of Astoria.

MOTTIER'S WINE.—Just after our notice last month, but before he could possibly have seen it, we received a sample from Mr. Mottier himself. This was made "on the lees," is two years old, and in all respects is a beautiful wine. It is rather lighter than that noticed last month, has a mild bouquet, and is peculiarly rich and delicate. An old wine taster from Portugal, to whom we showed it, said it was "splendid," which confirms all that we said last month. Not its least recommendation is its undoubted purity; and this is a point we have tried to impress upon all our wine makers, and they succeed just in proportion as they attend to it. We *must* get rid of all adulterations or additions.

THE DOUBLE ZINNIA.—We present our readers with a "portrait" of the new Double Zinnia, taken from the London *Gardener's Weekly*. It is said by the editor to be a "correct representation," of the natural size of the flowers. It is remarkable for its great symmetry. The plants were grown by the Messrs. Carter, of Holborn, who received the seed from a correspondent in Oude, India. The Messrs. Vilmorin also received their seed from India. This is said to be all that is known of the history of these new Zinnias. "It will be seen from our cut," says the

DOUBLE ZINNIA.

Gardener's Weekly, "that the ordinary florets of the centre of the flower in the common Zinnia are here transformed into flat, petal-like colored ones, similar to those on the border of the flower, (florets of the ray,) and we are informed from the before-mentioned respectable seedsmen, that this character is permanent, and that the plants come in as true from seeds as China Asters, the different colors separate, and the double forms still double." So far as we can form an opinion from the above engraving, and what is said by Dr. Lindley and others, we are disposed to think that we have a substantial acquisition in the Double Zinnia, one the more to be prized since it is in its greatest perfection at a time when many other flowers begin to fade. It is to be grown the same as the single varieties.

A Portfolio Paper File.—We have just added to our library an article which we think will be useful to all our readers, or to any person who takes a newspaper or a periodical. By a very simple arrangement the papers are filed away in a substantial cover, which answers all the purposes of binding. Letters, music, drawings, &c., can be filed just as well as newspapers, as the portfolio is made of various sizes. It is called Jacobs' Patent Portfolio Paper File, and we suppose can be found at the principal bookstores.

The Delaware Grape.—We have just been shown a letter from J. Fisk Allen, Esq., of Salem, Mass., in which he makes an allusion to our article on the Delaware Grape. He says: "I am glad to see Mr. Mead, in December number of Horticulturist, giving his opinion of the Delaware Grape as a native. I pronounced it a native years ago when it was first said to be *Red Traminier*. And Dr. Wight in report of fruit committee of Massachusetts Horticultural Society, so stated it, and published it to the world in their annual report. I had *Red Traminer in fruit then for years*, and have been annoyed by the statements constantly recurring pronouncing it a European variety." Mr. Allen, who has grown the foreign Grape so extensively, and studied its habits closely, may fairly be presumed to know something of its characteristics. It is peculiarly gratifying to have our opinion confirmed by such high authority.

Italian Bees.—"Are Bees horticulturul subjects?" Certainly, and sweet ones too, only they are not to be handled overmuch. A friend of ours has become ecstatic over his Italian bees and considers Mr. Parsons a benefactor, &c. We subscribe to this, and to all that can be said in praise of Bees, but our friend's article is too long for one insertion, and we can find no break in it. It might well be shortened. In the mean time, our readers will do well to look after these Bees, (we mean to make a change in our hive,) and read Mr. Spangler's new *Bee Journal*, a capital work, which will tell them much they ought to know on the subject.

A Rocker without a Rocker.—Stopping at a friend's a few evenings since, we were placed in a chair that suited our tired condition exactly. It stands on castors, and can be rolled easily when necessary. It can also be fixed in any reclined position, which adds much to its value as an *easy* chair. The rocking motion is easy, and in all respects pleasant. The style of the chair is elegant, making it an ornament to any drawing room. It was invented by Mr. Wells; and if he will only get up a pattern within the means of our rural friends, he will entitle himself to our thanks.

Peach Buds.—Mr. Mackie, writing from Clyde, N. Y., says: "Peach buds mostly killed here, though not quite all. 12° below zero at 9 P. M., 7th inst."

Brooklyn Horticultural Society.—There seems to be a feeling quite prevalent among our rural friends that our Horticultural Societies might be made productive of much more good than they now accomplish, and this feeling we share very largely. Some of the members of the Brooklyn Society are moving in this matter, and we believe the society is being reorganized on a more useful basis. We hope the matter will not be allowed to rest till this has been done. Several articles have recently appeared in the *Brooklyn Eagle*, by members of the society, which are suggestive. "Brooklyn," the first writer, thinks "the society should have a 'local habitation' as well as a name, and should not be resolved out of existence for six months after each exhibition." In this he is undoubtedly right. The society, in some form or other, should be found *somewhere* each working day in the year, and this is entirely practicable. He thinks, also, that a society should have some other object than holding two flower shows a year, an opinion which we have often expressed. He suggests, *first*, that the society should have a

proper exhibition room or "Gardener's 'Change" in some central location; a good suggestion, not without its difficulties, but worth a strong effort. *Second*, that weekly evening meetings be held; good again. *Third*, that a Reference and Circulating Library be established; nothing could be better. He has no objections to exhibitions, but thinks more than two should be held, so that the various classes of fruits and flowers could be seen in perfection, and asks, "What satisfaction is there in looking at unripe pears and grapes?" He would entirely abolish prizes as worse than useless, and reply upon a proper *esprit du corps* among the members; to which the gardeners would probably demur. But if prizes are offered, he would have them divided into three classes, one for commercial gardeners, one for hired gardeners, and one for amateurs: a classification which we have often favored. He then very properly suggests a course of lectures, and closes as follows: "A Society established on a plan of this kind would, I think, command support and respect; much dissatisfaction seems to have arisen lately at the degeneracy of horticultural and kindred societies; they are losing the countenance of those necessary to their useful existence, by their inertness, and by mixing up horse-racing, female equestrianism, patchworks, daguerreotypes, gambling, quack medicines, brass bands, &c., with their exhibitions."

"Improvement" in a few days follows up the subject in the same view. He thinks a "*Model Society* could be maintained here in active life, and its members counted by thousands instead of hundreds, and instead of *begging* the public to support it, they would be eager to become members of it, even at three dollars per annum." Such a Society Brooklyn ought to have, and it would be a fitting reward for such exertions as John W. De Grauw has made. "Improvement" suggests, *first*, that, for want of a suitable garden, a perpetual exhibition be opened, where visitors can see specimens of choice plants, learn where they can be bought, their price, &c. This would present peculiar advantages to both purchaser and seller. *Second*, that Catalogues of all the Nurserymen, Gardeners, &c., be kept, which would afford further facilities to purchasers. *Third*, that instead of money and medal premiums, a drawing or photograph of the prize article itself be given, the Society also keeping one, as suggested in the HORTICULTURIST some months since. This, we think, would work some good results. *Fourth*, that a cabinet of models, drawings, woods, an herbarium, &c., be made. Nothing could be more to the purpose. *Fifth*, that there should be a Library and Reading Room, and that clubs be formed so as to get magazines, &c., cheaper for members. A capital idea. *Sixth*, that the Society correspond with individuals and Societies, and solicit an exchange of plants, seeds, &c., and also import and collect new and rare plants and seeds for distribution among the members. Good again. *Seventh*, that weekly meetings be held for discussion, lectures, &c., in connection with an exhibition of specimens, and that the proceedings be published. Precisely one of the things wanted. *Eighth*, that all of the above be *free* to members, but that a small charge be made to the public for admission to the lectures, library, and exhibitions. He thinks ladies, children, invalids, business men, mechanics, and gardeners would find this a delightful place in which to pass an hour. Yes, instruction and pleasure to a much greater degree than in many places where they sometimes "pass an hour." *Ninth*. "Have a standing advertisement of the aims, objects, and advantages of belonging to the Society, the location, officers, exhibitions, meetings, &c., so that the public will know *where* to find it and *what* it is." This kills "*several* birds with one stone." *Tenth*, he thinks "there is no way in which a person could invest *three dollars* and receive so much benefit, or do so much good by spreading abroad such a refining influence as the Society would have." In this we agree with him, provided the other things are done. He concludes by saying to those who think the thing can not be done, "Try it. Give the public the worth of their money in practical knowledge, and they will both support the Society permanently, and patronize the gardeners." There is a mutual obligation involved in this point which ought to be further

elucidated. The idea of "Improvement" clearly is, *a working society*, one that will *do something*.

We next have "Brooklyn" in response. He excepts to the expressions, "Instead of begging the *public*"—"The *public* will not support us"—"Give the *public* the worth of their money." He thinks the Society should calculate little on the "*public*," using the term in its broadest sense; that it should be more especially a society for *gardeners*, and that the secret of failure may be found in the fact that the *public* has been appealed to rather than they. He says, "Before the Society undertakes to educate the *public*, I think it had better secure tutors for the job by educating the gardeners." That is pretty pointed for one who "goes in" for the gardeners to the exclusion of the public. But will the gardeners support a society of themselves? He says, "The gardeners are not beggars, and should not want the public to support a society for them. It is for their benefit, and they must pay for it, and I believe will be found willing to do so, if they can get the worth of their money." It seems to us clear that they will not without this, and then the public must help them. The fact is, it is hard to keep clear of the "public." "Brooklyn" next takes up the "finance question." "Standard works of reference which every gardener ought to have access to will certainly cost fifty dollars; interest on this, say three dollars a year." Then there are horticultural and agricultural papers, without which he can not keep posted, which will cost him seven more. If he buys these himself, there will be an expenditure of ten dollars a year to prevent him from getting behind the times, and half the sum would support a good society. The idea is, to show that a gardener can *afford* to become a member of a society. He thinks five dollars a year none to much for either trading gardeners or the public. We do not think either of them prepared for this yet; but in so far as "Brooklyn" would have gardeners intelligent and self-reliant, we go with him heartily; and this would seem to be his main purpose. We would give the intelligent gardener a position of social equality, and erect no barriers between him and the public; and in this "Brooklyn" will no doubt agree with us. The gardener, at present, is his own worst enemy. Why will he not see this? "Brooklyn," in conclusion, does not "think it advisable to do any thing in the matter of a Botanical Garden until the 'mission' of the Society in other ways is in process of fulfilment," in which we agree with him.

In a letter just received from an active officer of the Brooklyn Society, he says, in reference to the failure of societies, "Their *failure* seems to me to arise from not giving their members and the public such information as they require." Again: "It seems to me there are thousands in our cities and towns who, like myself, have a small place and a real love for such things, and it is to such societies we should look for information; such a society should be an 'Exchange" where all such knowledge could be obtained. If they were such, I don't believe we should see such accounts published of them. I hope this question will be continued, and all our Societies aroused and carry out the objects they were designed for."

We shall recur to this subject again, in the hope that some good may result from it. In the meantime, we commend these suggestions to the consideration of all Horticultural Societies.

BOOKS AND CATALOGUES RECEIVED.

Fourth Annual Catalogue of Plants, &c., cultivated and for sale by *Edgar Sanders*, Lake View Flower Gardens, Chicago, Ill.—Consists mainly of a fine assorment of bedding plants, Dahlias, Roses, &c.

Transactions of the Massachusetts Horticultural Society for the year 1860. From Eben Wight, Corresponding Secretary.—It is made up of Reports from Committees, Lists of Prizes awarded, an interesting Address from President Breck, a Zoological Report from Professor

Jenks, complaining of having nothing to do; an interesting article form Mr. Sprague on Introduced Plants, a very good one from E. S. Rand, Jr., on Orchids, and others, the whole making a valuable record. It is an interesting fact, that the property of the Society, at the present time, amounts to the handsome sum of $89,540.83. It may well pass for a "solid" society.

Seventh Annual Catalogue of Choice Verbenas, cultivated and sold by *Dexter Snow*, Chicopee, Mass. 1861.—The Verbena is Mr. Snow's specialty, and we have here a splendid collection.

Catalogue of Green-house, Hot-house, and Hardy Herbaceous Plants, for sale at *Bridgeman's* Horticultural Establishment, Nos. 876 and 878 Broadway, New York. Nursery and Green-houses, Astoria, N. Y.—A very neat Catalogue, embracing the best old plants, and a good many new ones.

Descriptive Catalogue of Flower Seeds, with Practical Directions for their Culture and Treatment. *James M. Thorburn & Co.*, 15 John Street, New York.—Neat and compact, embracing about every thing in the way of flower seed that can be thought of.

Vines, Plants, &c. *J. H. Boardman*, Brighton, Monroe Co., N. Y.—A circular, consisting of well known fruits.

Abridged Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, and Plants, cultivated and for sale at the Monroe County Nurseries. *Gould, Beckwith, & Co.*, Proprietors, Rochester, N. Y., 1860–61.—Another well-printed catalogue, with choice contents. We do like good ink and paper.

Catalogue of French Hybrid Gladiolus, (Seedlings of Gandavensis,) and other Spring Bulbous Roots, &c. *J. M. Thorburn & Co.*, 15 John Street, New York. 1861.—This embraces the fine collection alluded to elsewhere. It also contains a list of novelties in the way of flower seeds larger than usual.

Descriptive Catalogue, No. 8. French Hybrid Gladiolus, and other Summer and Autumn Blooming Bulbs, for sale at *Bridgeman's* Horticultural Establishment, 876 and 878 Broadway, New York. 1861.—This embraces, with some additions, the collection we examined last season, some of the best of which we have described in another place.

Great Upper Canada Seed Establishment. Descriptive Catalogue of Seeds for the Farm, the Kitchen Garden, and the Flower Garden; also, of Culinary Roots, &c., for sale by *John A. Bruce*, Seedsman, Nurseryman, and Florist, 46 King Street, Hamilton, C. W. 1861.—Not only a catalogue of seeds, but also of Garden Implements, Fertilizers, works on Horticulture, choice fruits, &c.

Catalogue of Selected Roses and other Hardy Plants, including both old and new Varieties, cultivated and for sale by *James Pentland*, at Green Mount Garden, Baltimore. 1861.—The list of Roses is particularly fine. There are also Azaleas, Camellias, Dahlias, Verbenas, Grapes, and other good things.

Spring Catalogue of a choice Collection of Floricultural, Vegetable, and Agricultural Seeds, &c., to be had of *William Elliot*, Seedsman and Florist, 31 John Street, New York.—Mr. Elliot gets a good deal in a small compass, and gives some good practical suggestions to the amateur.

The Mother's Magazine and Family Circle. By Rev. B. J. Relyea, Editor and Proprietor, 397 Broadway, New York.—As its name indicates, this Magazine is addressed specially to mothers: the home circle is its peculiar sphere. It is ably conducted, and calculated to exercise a benign influence.

Correspondence.

EDITOR HORTICULTURIST:—I was raised in the parlor, and when I was married, a few years since, scarcely knew a lilac from a locust-tree. However, I married a farmer, and came to the country to live, and *opened* some eight or ten acres for ornamental improvement; I say *opened*, for there was a regular cutting of corn-stalks to begin with, to say nothing of the removal of *pig-sty*, tan-house, ash-house, and "other things to match," that we found just in front of our small old-fashioned country house. Now, you, who are accustomed to your hundreds of acres of "improved ground," will smile at my ten acres. But in *this* part of the country it is the most unheard-of extravagance and folly. Soon after I had had my "yard enlarged," a very practical neighbor said, "You are very extravagant to put all the farm in the yard." I replied, that ten acres was not *all* of 350 in the first place, and in the second, that it was economy; for, said I, you have a small yard, and a small garden, orchard, and meadow—separate fences around *all;* mine are all together, and I save fencing. This is the way I talked: and I loaned my books, and divided my flowers and shrubs with them, and *now* such an "enlarging of yards," and digging and planting as would astonish you! But my own ignorance was a worse enemy than the prejudice of others; however, I did the most sensible thing that could be done, I subscribed for the HORTICULTURIST. I had no gardener, couldn't tell when I should be able to afford one, but thought I might venture to have the farm hands plant a few things, and let them be growing; and when we commence planting, it ends, I presume, when there is nothing more to plant, and no place to plant it; and so I planted on, and on, and on, hiring an Irishman to work with me, until I count my fruit and ornamental deciduous trees by hundreds, and have seventy handsome evergreens, such as Hemlock, White and Scotch Pine, Norway Spruce, Balsam Fir, Arbor Vitæ, &c.; and all the Spiræas I have ever heard of, as well as Lilacs, Flowering Peach, Cherry, Currant, Syringas, Rhus cotinus, Dogwood, Redbud, and *every kind* of flowering shrub, and shrubs with ornamental berries, not forgetting the evergreen shrubs, such as Holly, Pyracanthus, Mahonia aquifolia, &c., and no one would ever know this to be the same place that it was four years ago. We haven't house-room enough for a white gardener, but in the plan of our new house I have a room for a single man, and he can't get married until we are able to build him a gardener's cottage. So for the present my liege lord has given me one of the farm hands for gardener. "I know my duty better" than to send the word *slave* to a northern P. O. *these* times.

But I set down to ask you a few questions, if you will be kind enough to give me the answers through your valuable paper, for of course I don't expect you to devote your valuable time replying to such a preamble as this. I not only *read* the HORTICULTURIST, but I *study* it, every day of my life. I have the back Nos. bound, and when I am particularly interested in any one subject, I read every article on that subject, in all the volumes I have. But I can't find out what's the matter with my apple-trees. Some six, eight, or ten inches from the ground, and sometimes nearer, the bark has turned black, and dead, and is dropping off; and in some cases there are small round holes, as if bored with a gimlet; but all the trees that have lost their bark are not bored. Do the birds, woodpeckers, &c., make these holes? or is it the apple-borer? or, is the condition of the bark called *blight?* if so, how can I save *these* trees? Must I let suckers from the stock grow round them, to shade them? And hereafter, to avoid the trouble, shall I buy my trees branching within an inch or two of the ground, that the leaves may protect the trunk—from what, sun or wind? They are such beautiful young trees, just coming into bearing—and such varieties as Pryor's Red, Rhode Island Greening, &c. And then my pear-trees, some of them, Louise Bonne, Passe Colmar, Vicar of Winkfield, &c. (oughtn't

that to be *Wake*field? Where *is Wink*field?) have a fine crop of pears every year, but they drop off when no larger than my thimble. What shall I do?

And where can I procure a rose, Tea China, or Souvenir d'Elize? I have been trying to find it ever since I saw the plate in the HORTICULTURIST. Is it perfectly hardy? will it stand out in Kentucky without any protection? I have an Isabella Grey. Winter before last I thatched it, and in the spring it was dead to the ground. Last winter I *didn't* thatch it, and it died to the roots. This winter I have thatched again slightly, after filling stable manure around the stem. Although it sends up vigorous long shoots every summer, it has never bloomed, and so I presume it blooms on the old wood, or on shoots from the old wood. What must I do with this? I have had a Beauty of Greenmount and Woodland Margaret, but have lost them both. I mean to replace them, however. Woodland Margaret bloomed once, and was certainly the most fragrant rose I ever saw. Are these two *perfectly* hardy? How ought we to manage them in winter in Kentucky? My *bush* roses won't bloom; how shall I *make* them? I have a large bed for bush roses, Palm Leaf, and the soil was rich and black, light and loose, with clay bottom, which I have never seen, however, and I have seen down four spades deep. When I made the bed, I put some rich earth where there had been oat stacks for years and years, and since, every fall, I cover the bed several inches with stable manure, and in spring fork it in; do they want sand?

You won't let me write to the HORTICULTURIST again, because I don't know when to stop. Please reply to my questions to *Maggie*, through the paper.

I have sent you several subscribers, only one from this post-office, however, William Hoffman, but I mean to send more. Respectfully, CARRIE D. M.

Mount Sterling, Kentucky, 17th Jan., 1861.

[It is a lucky thing you "married a farmer a few years since," Carrie, or we should be "dead in love with you." Now don't show this to your "liege lord," unless he has got a soul as big as your own. Why isn't Kentucky just over *our* river instead of the Ohio? We'd soon be over and help you out of your troubles. You went to work heroically, and have your reward. If your neighbor talks to you any more in that way, just box his ears. You were right, and reasoned like a woman of good sound sense and sound taste, and as the best evidence of this you subscribed for the HORTICULTURIST. Then you planted and planted, and now you count your trees by hundreds. That's admirable. Would that every State, and city, and village, and farm had at least one such woman! What strange scenes of beauty would spring up all over the land! Tell your "liege lord" that *we* say he must provide you with a gardener's cottage this very spring; the gardener might take it into his head (they get strange things in their heads sometimes) to get married, and then what would you do? But if you have told him he can't get married, then he is bound not to do it. Now, Carrie, you can send any thing you please to our P. O. these or any other times, and if there's any fighting to be done about it, we'll do it. A man don't get such a woman to defend every day. You see we are getting a little worked up.—Certainly, we'll answer all your questions, and if you hadn't "gone and got married" a few years since, we might *ask* one; but it's no use now. You do precisely right in *studying* the HORTICULTURIST, and following a subject up, and that is what all ought to do. It is not the woodpeckers that damage your trees; it may be the blight, but we suspect that the borer is the enemy concerned in this matter. Examine the holes in all your trees, and get the borers out either by cutting them out or running in a wire; remove, also, the dead bark. Then get some *common* tar, and reduce it to the consistency of thin paint by adding hot water; apply this to the trees with a brush about an inch below the surface, and six or eight inches above. The tar must be used as a preventive, not a cure; where the grubs are already in the trees they must be got out with the knife or wire. By no means let the suckers grow about

your trees; cut them *clean out*. Let your branches start two or three *feet* from the ground; this will not only afford protection to the trunk from the cold winter's wind, but your trees will come earlier into bearing, and yield better fruit. Vicar of *Winkfield* is correct. You have been reading Goldsmith. The pear was discovered in France by a French curate, and was hence called *Le Curé*. It was introduced into England by the Rev. Mr. Rham, of Winkfield, a distinguished agriculturist, and then took its present name. Your pear trees are probably planted too deep, or you may disturb the surface roots too much in working the soil; we can think of no other cause. We can have the Rose sent to you, but it will not be hardy in Kentucky. The Isabella Grey is not hardy enough for you; the only thing you can do is to bend it down in the fall, and cover it with earth. You might grow it in a large pot, plunge it in summer, and in the fall put it in a cool cellar. You must have the old wood to secure the flowers. If you replace Beauty of Greenmount, &c., you will have to bury them, as suggested above, or you will lose them again. Your "bush roses" *ought* to bloom in a deep, rich, well-prepared bed. Perhaps the buds get winter killed; if so, cover the bed with cedar brush during the winter. But if they are Hybrid Perpetuals, they ought to bloom in the fall, *anyhow*. What are they? Yes, we will let you write as often as you please; and you must do so till your roses bloom and your pears fruit. If we can only get a full understanding of your difficulties, we know we can enable you to overcome them. Thank you for the new subscribers and the promise of more. Not one of them can refuse you.—Ed.]

A Second Barnum.—Mr. Editor:—Freed from a cloud of tobacco smoke, sir, strong enough, to suffocate any of the fair sex in the metropolis, we ran away from it, and got into Newport, yes, Newport, sir, to see the "*Barnum Orchard House*." The never-resting mind of man "wanted to see some of the new discoveries" as well as "A Close Observer," (and "now I sit down, and give vent to my feelings upon a subject that has filled my thoughts for some time, and now, like a bird that has escaped from its cage, give evidence of its satisfaction by lifting up its voice.") We arrived at Mr. Lawrence's beautiful place, and were received by Mr. Chamberlain, the gardener, with good old English cheer, as such a man with such a good natured disposition is bound to show to all and every visitor. The glaring statements made by "A Close Observer" worked up my curiosity so much, Mr. Editor, to think that such gross duplicity could be practiced by a gardener on his employer and visitors in general, that I was determined to go and see something of the duplicity in its commencement; for if vines were grown and fruited in wire baskets, *now* would be the time for its commencement. We never had seen such things, it is true—never had seen Peaches or Apricots grown as orchids, and doubted its practicability. But, again, to think for one moment that the proprietor of such a place could be so duped throughout a whole season, by a gardener in his employ, was more than my common sense could credit. So we went to see, and we did see. See what? First, a most beautiful range of glass nearly 300 feet in length, and built in as thorough and complete a manner as I ever saw houses built. This range of glass is divided into six compartments, for various purposes, and for which it appears to be well adapted. But what did we see? Well, we saw the wire baskets, and we saw grape-vines growing in them, and we saw that they were good grown vines, canes nearly four feet long and about three-eighths of an inch in diameter; and we saw from these self-same vines, young green shoots having on them several good bunches of grapes. Now do not let us be misunderstood; these bunches were not in flower, but coming into flower, and we have seen grapes enough to know what such a shoot ought to produce under ordinary management, and the general management we saw manifested on the place warrants our opinion in the ability of Mr. Chamberlain being fully up to the mark. Well, what else did we see? We saw Peach trees in wire baskets, very prettily trained on them, and we saw Apricots in the same way, and we saw that they were just set; mind

now, we do not mean just set in the basket, but the fruit was just set, and commenced swelling off and in good earnest. On this important point rested all our curiosity; so we were satisfied, and you, Mr. Editor, and every one else who doubts the subject, can go and see and feel for yourselves. This is not all we saw; we saw just what you would very much liked to have seen in your office, and on your table—a box full of varieties, to be sent as a present to a friend. It contained a first-rate, luscious Pine-apple, 12 inches long, with the sugar running freely from its pips; ripe Strawberries, French Beans, new Potatoes, ripe Tomatoes, Cucumbers, Radishes, and Mushrooms; and we firmly believe, although we at first felt a little Thomas like, that Mr. Chamberlain will send you, Mr. Editor, down to New York, one of the self-same baskets, with these very same grapes, *not tied on them.* Ripe grapes, grown in wire baskets, so that you can cut and taste for yourself; and I think he will also allow you to give a bunch to your "Close Observer," so that its sweet nectar may open his soul a little more, and wash out some of that dross from his carnal vision, and then he will be enabled to have perhaps a better heart, and one that can feel for another.—Respectfully yours,

A Second Close Observer.

[It would seem, from the above, that the same things present themselves very differently, even to "close observers." This "Second" one of the name looks at things cheerfully. We know him to be capable of enjoying good things, even to a Pine-apple "with the sugar running out of the pips." Now we have a pair of eyes which we can trust implicitly, and a taste which we have never had occasion to reproach, (though it has more than once been bitterly tried,) and we have pretty much made up our mind to go to Newport and see whether "these things be so." We have had the best of evidence as to the character of the fruit grown by Mr. Chamberlain, but we want to be enabled to "draw the line" between these two observers. In the meantime, if that basket gets forward before we do, we hope to have the pleasure of seeing it on our table.—Ed.]

Grape Grafting.—I have just read, in your January No., *El Medico's* Treatise on Grape Grafting, and if you think proper I will add my experience in the same art. In the spring of 1859, I imported direct from Los Angeles cuttings from the celebrated California Grape. They arrived when my vines were getting *into leaf*, but having some stocks which were useless to me, I determined to try the experiment, but without much hope of success. I cleft grafted about one dozen stocks, a few inches above the ground; wrapped them carefully with bast and wax, and, to my surprise, they all took, and many of them grew from twelve to fifteen feet during the summer; and what was quite as remarkable, most of them bore fruit the same season.

I simply give the facts. I will leave it with others to make comments.

New Orleans, Feb. 2, 1861. H.

[Your climate is infinitely more favorable to the success of the operation than that of "El Medico;" still, your marked success ought to encourage him to further efforts. We are glad to see that the trials of "El Medico" have awakened so much sympathy. He must not give it up yet.—Ed.]

To the Editor of the Horticulturist:—Sir: I wrote some weeks ago to request that you would inform me, through the Horticulturist, whether you knew of any good Heart or Bigarreau Cherry later than Downer's Late. Will you have the goodness to say? May I trouble you to give a list of six Heart and Bigarreau Cherries, of early and late ripening, which you would recommend, having especial regard to hardiness in the tree. My former letter was no doubt destroyed in the late fire.—Your obedt. servt.,

Toronto, Canada, 25th Jan'y, 1861. An Old Subscriber.

[We know of but few good cherries later than Downer's Late, most of the later kinds not being worth growing. The best of those that ripen later are the following: Black Bigarreau of Savoy, Buttner's Black Heart, and Sweet Montmorency, about the middle of July. Pierce's Late, last of July. The Hovey, of which we have only seen the fruit, last of July; but our Boston friends say it hangs on till first of August. Then, ripening usually about the time of the Downer, we have the Amber Gean, Black Eagle, and Florence. There are some of Dr. Kirtland's seedlings which we have not seen, which are said to be much later and of good quality; his early kinds we know to be so good, that we should be willing to take the later ones on trust. In regard to early and late Bigarreau and Heart Cherries, you will find the following to give you a succession of delicious fruit. Early Purple Guigne, last of May; Knight's Early Black, Black Tartarian, Gov. Wood, Elton, first to third week in June; Bigarreau or Yellow Spanish, last of June; Holland Bigarreau, first of July. This is about the relative time of ripening, when planted under the same conditions. Your former letter shared the common fate, and we are obliged to you for having repeated your queries.—Ed.]

Will the Editor of the Horticulturist please answer the following questions at some convenient time?

What would be the disadvantages (if any) in planting a grape-vine on the north side of a building, and training the branches on the south side?

Would plaster be profitably used in *very* sandy soil?

What are well-ripened Concord Grapes worth, wholesale and retail, in their season, in New York?

I have a water-tight vat, some ten feet square and three feet deep, in which we put soap-suds, slops, and refuse matter from the house. The privy is over one end of it. The soap suds accumulate faster than I can find absorbents. What absorbents would you recommend, and what deodorizers? Please tell us the best thing to be done to prevent its giving off any thing injurious to health in hot weather? R. C., Jr.

Provincetown, 1861.

[The disadvantage would be, that your border would never be properly warmed by the genial rays of the sun, the soil would be liable to become sour, &c., and your grapes would be lacking in flavor; your vines would also be peculiarly liable to mildew. If you *must* plant on the north side of the house, let your border be most *thoroughly drained*, and if not already sandy, use sand freely and a portion of vegetable mould, the object being to obtain a light and warm soil. The manure used should be old and thoroughly decayed. You may thus obviate some of the disadvantages. Plant Delaware, Concord, or Diana, but not Isabella or Catawba. —We do not think you can use plaster profitably on very sandy soil, except as a top dressing to grass. *Muck* is what you want.—The price of well-ripened Concords varies in different seasons from 15 to 25 cents or more per pound. We saw some handsome bunches sell last fall for 30 thirty cents per pound.—In regard to your vat, *dry* muck is the best absorbent; for a deodorizer you can use charcoal dust, gypsum, or green vitriol, (sulphate of *iron*.) Two or three pounds of green vitriol or copperas, dissolved in a pail of water, are sufficient to deodorize a large mass of material like the contents of your vat. You will probably find the muck and charcoal, however, to answer all your purpose.—Ed.]

FRUIT GROWERS' SOCIETY OF WESTERN NEW YORK.

(*Continued from page* 104.)

Subject 3. Can the yellows in the peach be introduced by the importation of trees from infected districts?

H. N. Langworthy thinks the yellows can be communicated by using a knife in budding which had previously been used upon an infected tree. A tree diseased from the yellows will

ripen its fruit a month earlier than a healthy tree; but it will die the same year. It gives the leaves a yellowish appearance, and gum oozes from the branches.

L. B. LANGWORTHY thinks yellows is contagious. Knew of a case where five hundred fine healthy peach trees were set out, were well cultivated, and made a fine growth. In three different parts of this orchard some trees were struck with the yellows, and around these parts there were circles of diseased trees. Knew of one person who desired to test this question, and inoculated a healthy tree with the virus, and it killed it. I budded a tree once with wood from a tree with yellows, and I thus killed my tree.

Dr. SYLVESTER agreed with the gentleman. David Thomas once received trees from New Jersey which were diseased; but he cut down and burned at once every tree which showed signs of the yellows. If this disease is allowed to extend in western New York, it will be as fatal to our trees as it is in New Jersey, where one or two crops of peaches are all that the fruit-growers expect from a planting of the trees.

C. L. HOAG impressed upon members the importance of avoiding these yellows in western New York, if possible. A friend of his had lost about all his orchard by planting a diseased tree from the east.

CHARLES DOWNING has known the disease for twenty or thirty years, and believes it contagious. If a diseased tree remain, all the surrounding trees take the disease and die. The only way is to remove the diseased tree or trees; and whenever and wherever I see one I take it out. The disease can be carried by matter or "virus."

Mr. SHARP would warn people that many New Jersey trees are being sold here; was fearful lest we become like New Jersey.

H. E. HOOKER knew of old orchards which were planted with trees brought from New Jersey, and which are this day good trees; have also seen orchards planted with trees from the same locality, and *these* trees have had the yellows. Thinks it best to be cautious as to planting New Jersey trees. No conscientious nurseryman would be guilty of filling his orders with diseased trees, nor would he be implicated in sending to any farmer trees which would or will infest their standing orchards.

Dr. SYLVESTER remembered that in 1836 there was not in New Jersey one-tenth of the disease called "yellows" which there is at present. The New Jersey nurserymen send here for their peach pits to plant, and evidently think that the disease is not only contagious, but can be communicated by the pits.

Mr. DOWNING thought the same.

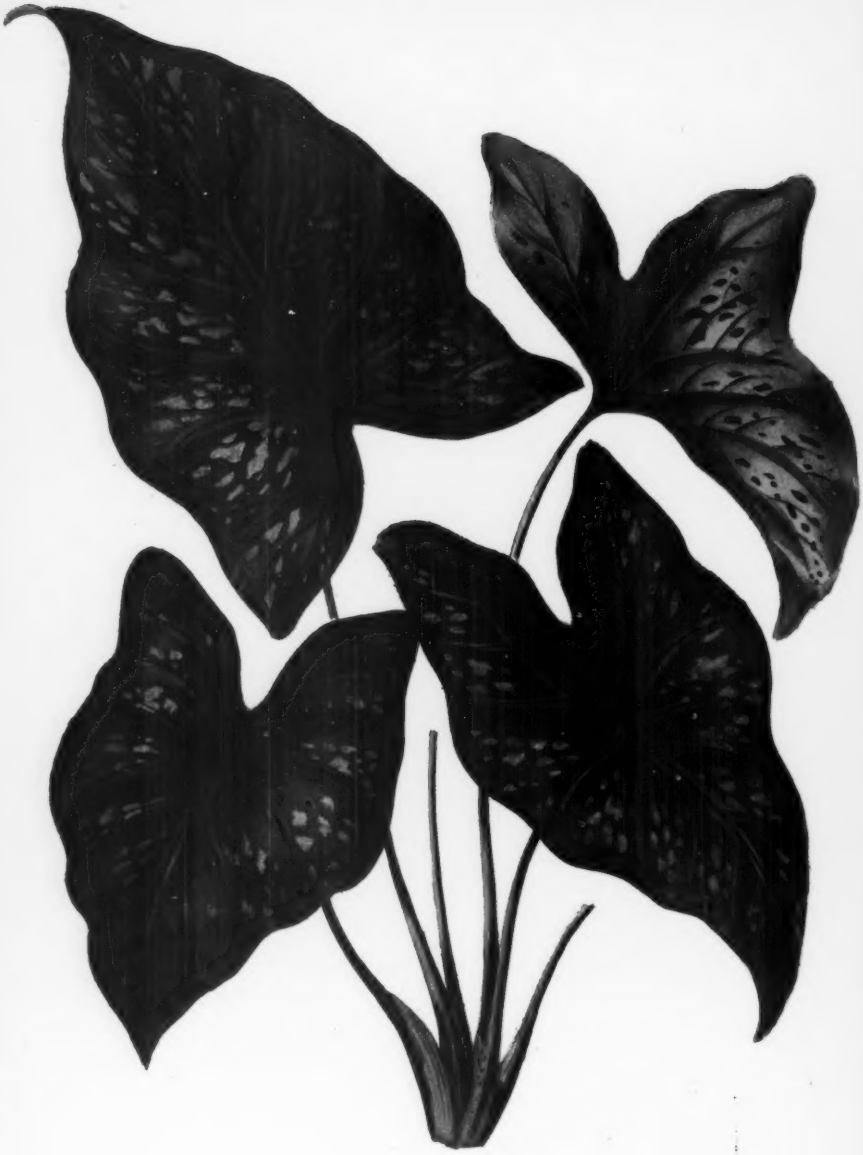
Mr. HOOKER stated that New Jersey trees sent south do not have it.

Mr. BARRY'S opinion was that yellows is *not* contagious; but still would prefer not to buy trees from infected districts. Some persons think it is communicated by the blossom. The cure for the yellows seems to be a good fertile soil. The cause of it (I think) is a poor soil; impoverished by heavy cropping; and by keeping trees in such soil we can make it constitutional.

F. W. SAY, of Monroe County, never saw a case of it in his town, and farmers raise large crops of peaches there. The best orchards in Greece came originally from New Jersey, fifteen or sixteen years ago; but have not seen it in trees brought later from the east.

Mr. BARRY.—All the young peach orchards in New Jersey look as healthy as any of ours do, but when three or four years old they have the yellows. Nursery trees there do not have, or at least do not *show* the yellows; but, generally, after bearing their second crop of peaches, the New Jersey orchards all die. Still in some parts even of New Jersey they are exempt from the disease.

(To be continued.)



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